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District long
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WIBAUX

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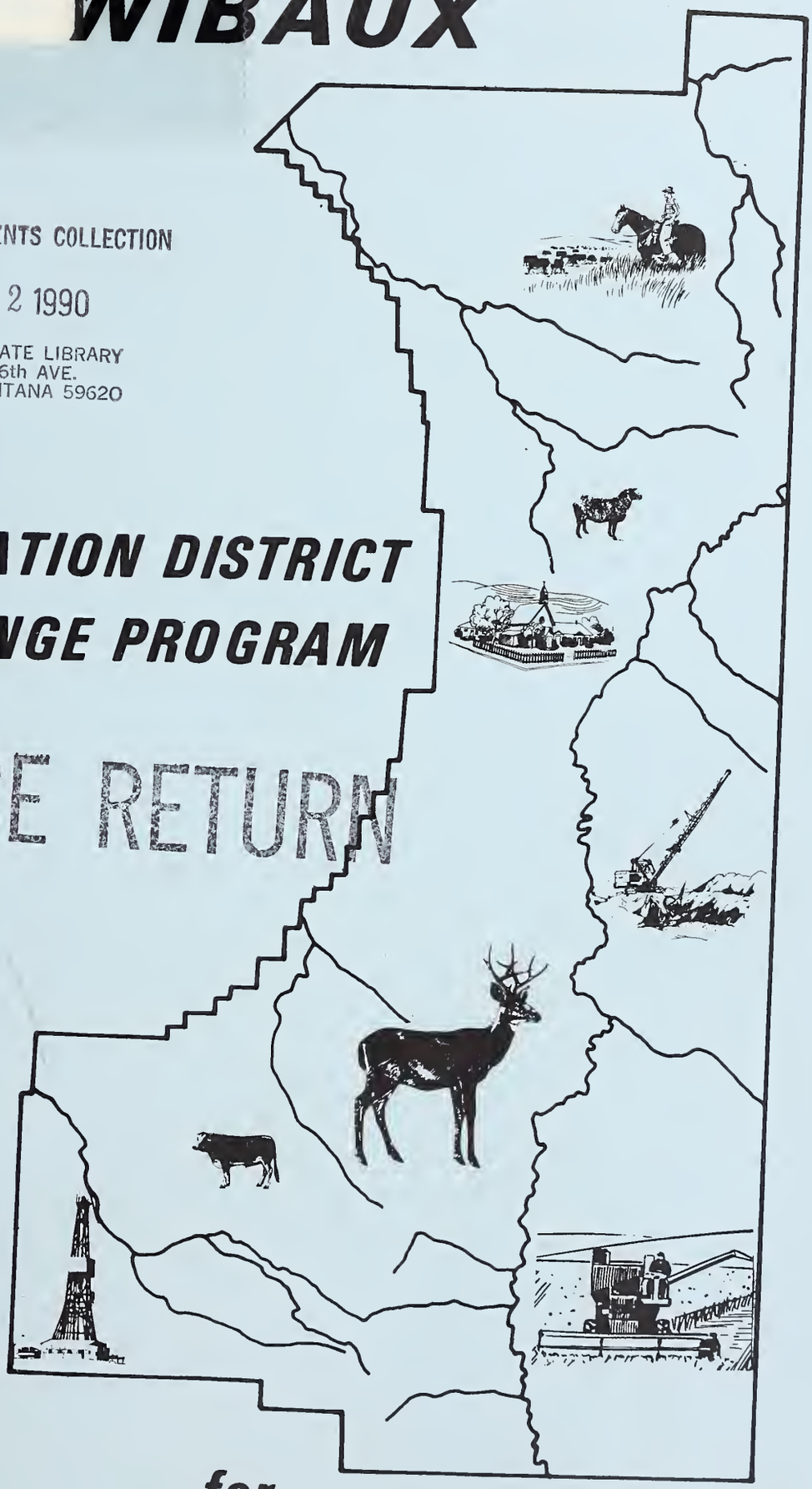

CONSERVATION DISTRICT LONG RANGE PROGRAM

PLEASE RETURN

for TOTAL RESOURCE CONSERVATION

JULY 1974

SECTION I - PURPOSES

SECTION II - DISTRICT POLICY

SECTION III - INVENTORY

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

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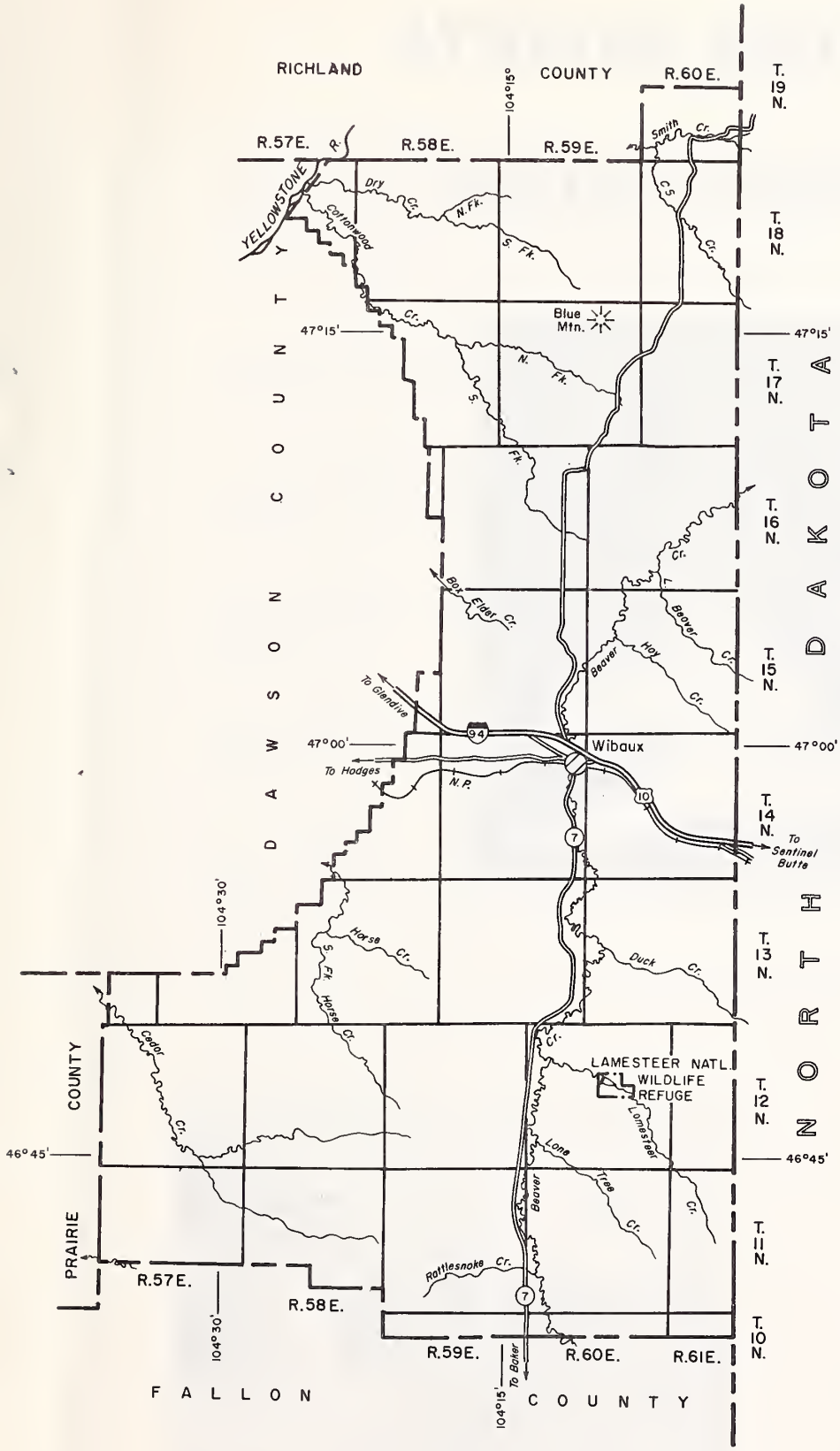

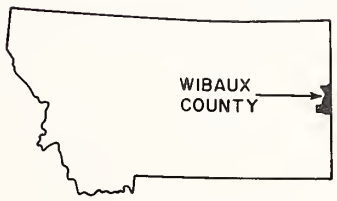

LOCATION MAP

WIBAUX COUNTY

MONTANA

NOVEMBER 1969

5 0 5 10 MILES

SCALE 1:500,000

TRANSVERSE MERCATOR PROJECTION

SOURCE MATERIAL: AMS TOPOGS NL13-2, NL13-5

USDA-SCS-PORTLAND, OREG. 1973

CONSERVATION DISTRICTS

PEOPLE WORKING TOGETHER

SCS PHOTO

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FOREWORD

The Wibaux County Conservation Program is a guide to assist the district supervisors and others with the over-all development of the natural resources in the county. This program was prepared by the Board of Supervisors, with assistance from numerous individuals, groups, local, state and federal agencies.

Section I deals with the over-all operations of the district program including authorization, history, and responsibilities of the governing body.

Section II outlines the policy as adopted by the district board. These statements provide the direction for development of district resources.

Section III includes an inventory of the resources in the district and presents a detailed analysis of the current resource situation.

Section IV outlines the broad objectives, goals and priorities which the district will strive to achieve through the implementation of this program.

Section V identifies various problems and opportunities which exist in the district. These will be reviewed and used by the board as a reference for developing their annual plan of work.

Section VI deals with various alternatives available to the district to use in implementing this program to attain the goals they have established.

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SECTION I - PURPOSES

PURPOSES

A. General

The Wibaux Conservation Program is a local plan of action to assist conservation district land occupiers with soil and water conservation and related natural resource uses based on land capability. The conservation district program serves in part and contributes to:

1. Resource conservation and development planning;
2. Comprehensive land use planning;
3. Environmental enhancement planning; and
4. Pollution abatement planning.

The program includes:

1. Obtaining and reacting to public involvement;
2. Establishing policy;
3. Inventorying and analyzing the resources;
4. Determining objectives and goals;
5. Establishing priorities;
6. Recognizing problems and opportunities for wise use and development.
7. Coordinating the implementation efforts of cooperating land occupiers and many resource groups and agencies;
8. Securing financing, technical and other assistance;
9. Continuing evaluation and updating to reflect changing situations.

B. Purposes

1. Soil Conservation

The primary purpose of the district is preventing soil erosion. In doing this, the district necessarily

becomes involved in water conservation, rangeland management, forestry and all related land uses.

Assistance has come primarily from agricultural agencies. It is anticipated that other agencies and programs, such as the Department of Housing and Urban Development, the Environmental Protection Agency and the Federal Revenue Sharing Program, may provide more assistance.

Increased pressures and demands for land as a place to live, work and play are expanding the district's role. The district has traditionally been oriented toward agriculture, for this is the use to which most land and water has been put.

Coupled with public pressure for a wider diversity of uses in increasing demand for a quality environment. Consequently, additional purposes of this program are to plan measures for pollution control and abatement to include ecological consideration of the multiple use concept as opposed to single use, plus an evaluation of trends toward public ownership and the various methods of regulation that might be used to effect proper land use. Soil conservation also gives emphasis to enhancement of water quality, natural beauty, and wildlife; preservation of scenic qualities, historic sites, and unique natural areas; and improvement of environmental health, job opportunities and education of the public.

2. Administrative Guide

This program will serve as an administrative guide for supervisors and is an outline of the means whereby the board of supervisors hopes to coordinate efforts for the orderly management of the natural resources on all lands in the district.

3. Reference

This program will serve as a reference for technicians, county commissioners, land use planners, community planners, researchers, educators and others working with the district.

4. Annual Work Plan

This program will serve as a basis for developing the District Annual Plan of Operations.

5. Information

This program will serve as the basis for an information program. Information will be directed to the public, particularly electors, cooperators, land owners-managers-occupiers-developers, legislators, county commissioners, conservation agencies and organizations, schools, churches, libraries and planning and development agencies.

6. Problems and Opportunities

The district program identifies the conservation problems and opportunities recognized by supervisors, cooperating agencies and advisory groups and outlines measures to correct the problems and/or develop wise management of natural resources. This program attempts to give a history of the district. It also explains and evaluates the present condition of the natural resources (soil, water, vegatation, and wildlife), and the opportunities that exist to protect and develop these resources. It further defines policies, goals and objectives, and working procedures of the supervisors. This program gives consideration to all private and public lands.

C. Jurisdiction

1. Private Lands

Basically the district program has jurisdiction in the private ownership land area and deals with water, soil and related resources. It has, as overall objectives, the treatment of each acre according to its needs and the use of each acre within its capabilities.

2. Public Lands

Mutual problems and opportunities for the conservation, development and use of public lands are intended to be correlated with the public land administrators, managers, and users.

D. Method

Land occupiers voluntarily sign cooperative agreements to develop and carry out a conservation plan with such help and assistance as may be provided by the district and other agencies working through the district. There are also mandatory provisions in the conservation district law for land use regulations and sediment control.

E. Authorization

The district program is authorized under the provisions of Montana Conservation Districts Law 76-101 to 76-117 and 76-201 to 76-233, Revised Codes of Montana as amended, particularly Section 76-108 (8) and is required as part of Memorandum of Understanding or other appropriate Agreements the district has and is authorized to cooperate and receive assistance from:

U.S. Department of Agriculture dated February 1963.
Soil Conservation Service dated October, 1969.
Montana Department of Natural Resources and Conservation dated February 1973.
Montana Fish & Game Commission dated February 1970.

Informal working relations have been established, or are desired, for cooperation and assistance from the following:

Federal
U.S. Department of Agriculture.
U.S. Department of Interior.
Bureau of Land Management
Bureau of Outdoor Recreation
Bureau of Reclamation
Bureau of Sports Fisheries and Wildlife
U.S. Department of Health, Education and Welfare
U.S. Department of Commerce
Office of Economic Opportunity
U.S. Department of Housing and Urban Development
U.S. Environmental Protection Agency
U.S. Army Corps of Engineers

State
Montana Highway Commission
Montana Environmental Protection Council
Montana Department of Intergovernmental Relations
Montana Department of Health and Environmental Sciences
Montana Department of Fish and Game
Montana Extension Service
Montana Department of Lands

Local
County Commissioners
Town of Wibaux
County Planning Boards
Superintendent of Schools
School District

Non-Governmental
Associations of resource interests such as

developments groups, banks, churches, youth groups, civic groups, etc.

Other major laws which relate to the district program are:

1. P.L. 46, Soil Conservation and Domestic Allotment Act of 1936. (USDA Secretary's Memorandum No. 1488 of February 1, 1962);

2. P.L. 566, Watershed Protection and Flood Prevention Act of 1954;

3. P.L. 87-703, Section 102 of the Food and Agriculture Act of 1962, Resource Conservation and Development program;

4. P.L. 91-190, National Environmental Policy, January 1, 1970;

5. P.L. 92-500, Federal Water Pollution Control Act of 1972;

6. P.L. 92-419, Rural Development Act of 1972;

7. P.L. 93-86, Title X, Agriculture and Consumer Protection Act of 1973;

8. Water Quality Rules and Regulations of Department of Health and Environmental Sciences;

9. Floodplain Rules and Regulations of Montana Department of Natural Resources and Conservation;

10. Subdivision Regulations of the Montana Department of Inter-governmental Relations and County Commissioners.

F. Organization, location, acreage

The District was first organized on January 15, 1940 as a result of petitions to the State Soil Conservation Committee and a hearing and referendum held and included all of the County excepting the incorporated Town of Wibaux.

The Town of Wibaux petitioned and entered the District on October 28, 1968. The present land area of the district is 568,960 acres.

The District name was "Wibaux Soil Conservation District" until 1961 when it was changed to "Wibaux Soil and Water Conservation District" and in 1971 the name was changed to "Wibaux Conservation District". These changes reflect the broader areas of resource conservation and development related to the district and its increased responsibilities.

G. Responsibilities

Supervisor Respnsibilities and Authorities:

The supervisors are elected by the qualified electors within the district. They are the governing body of the Conservation District with broad authorities as outlined in the Conservation Districts Law to develop and carry out a resource conservation and development program with the use of all available resources and authorities that they choose to use and can obtain. It is the policy of the district to cooperate with and use the services of other agencies for technical, educational, planning, research, and financial assistance to private land occupiers to plan and apply conservation practices. The Montana Department of Natural Resources and Conservation and District Supervisors can request state and county funds for the operation of the district.

SECTION II - DISTRICT POLICY

POLICIES

It is the policy of the Wibaux Conservation District to involve the public and cooperators to carry out the program of the State of Montana and the district with respect to the conservation of the soil and water resources and for the control and prevention of soil erosion, prevention of floodwater and sediment damages, furthering the conservation, development, utilization and disposal of water. It shall further be the district's aim to prevent and to control floods, prevent impairment of dams and reservoirs, protect the tax base, protect public and private lands, to assist in the carrying out of the environmental policies and programs of the state relative to natural resources and to assist in the carrying out of land use policies and regulations as provided in various state and federal statutes.

Specifically, the Wibaux Conservation District adopts the following policy for their resource planning program:

A. Encourage an accelerated education and information program to convey a basic understanding of the need for proper land use to all segments of society. Land use policies and plans must be developed with broad public involvement to ensure citizen support and understanding.

B. Consideration will be given to the needs and desires of the people to provide a quality environment, to ensure attractive, convenient and satisfying places to live, work and play.

C. The rights to economic opportunity and freedom of choice in the use of land should remain with the landowner so long as they do not destroy the resource or conflict with a safe, clean and healthy environment for society.

D. Land use policies should be oriented toward protection of the aesthetic values, which are an integral part of our history and way of life.

E. The capability and limitation of soils will be considered in making land use decisions or when increasing the intensity of a land use.

F. Land use policies should consider the impact and influence of the property tax structure. Tax structures should encourage agriculture, wildlife, recreation and similar uses of land in the public interest.

G. To develop and improve the rangeland resource for maximum production, protection of the soil resource and to prevent or reduce sediment pollution of water.

H. To provide broad direction and coordination in maintaining water quality while attaining maximum beneficial use of the surface and ground water resources.

I. Development which results in unsightly urban sprawl should be discouraged.

J. Should mining occur, construction and similar activities which alter and destroy the surface of the land must be treated and reclaimed for planned future uses.

K. Land use policies and plans need periodic review to determine changes in land resources use which are consistent with environmental and social needs.

SECTION II

RESOURCE INVENTORY

PRECIPITATION

1941-70	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Mean Monthly	.36	.30	.51	1.25	1.96	3.38	2.17	1.59	1.33	.66	.44	.24	14.19
Maximum												(1970)	20.59
Minimum												(1960)	8.14

TEMPERATURE

1941-70	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Mean Monthly	11.6	18.0	26.5	41.8	52.9	61.4	68.9	67.9	56.1	45.2	29.2	18.6	41.5
Mean Daily Maximum	25.9	28.5	37.7	55.9	67.9	75.2	84.5	83.6	71.9	59.4	41.2	30.1	55.2
Mean Daily Minimum	2.7	3.9	13.6	28.6	38.7	47.4	53.0	50.5	40.4	29.4	17.5	7.9	27.8
Highest	62	70	80	88	100	102	109	110	106	92	75	66	
Lowest	-55	-47	-31	-7	12	24	32	26	7	-16	-27	-39	

SOURCE: Climatography oft the U. S. No. 81 and No. 86-20

CLIMATE

Climate in the District can be described as continental with cold winters, warm summers and marked variations in seasonal precipitation. The average annual precipitation is 14.45 inches per year at Wibaux with 80% occuring during the growing season April - September. June is normally the wettest month followed by May and July. Summer precipitation normally occurs as thundershowers, but gentle rains are common in May, June, and September. Thundershowers will occasionally result in hail storms causing damage to crops. Past records show that dry years will occur 10-20 percent of the time.

Winter snowfall will average approximately 29 inches per year. Greatest snowfalls usually occur in late winter or early spring.

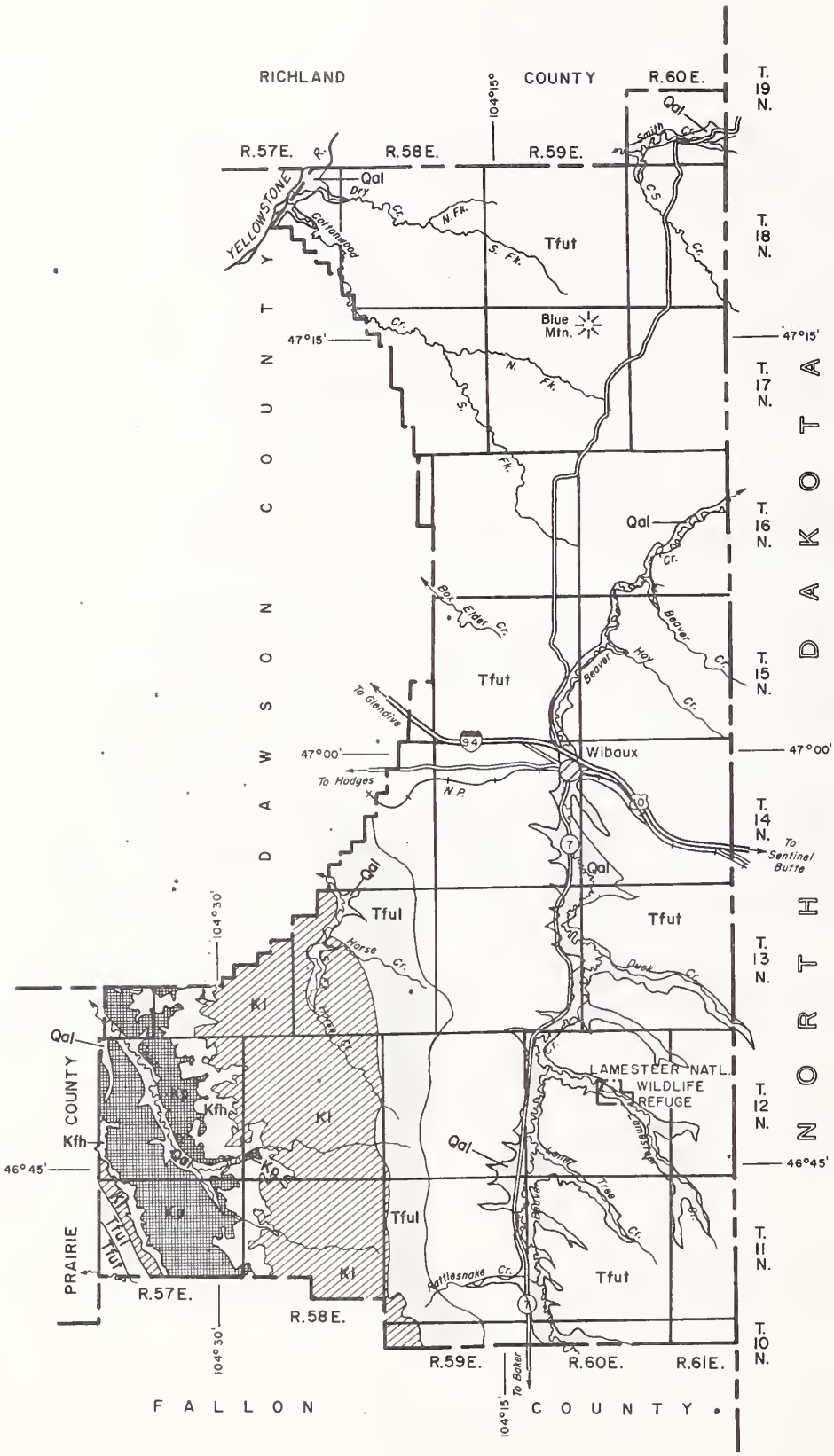
Some very cold weather can be expected each winter, however, these cold spells ordinarily last only a few days. Occasionally January or February temperatures will average below zero. Mild winters are not uncommon.

Summer temperatures are characterized by warm weather lasting for weeks at a time. Some hot weather occurs each year but seldom lasts for more than a few days at a time. Temperatures can reach 90 degrees F. or more during any month from May to October. Sunny weather occurs 70 to 80 percent of the time.

The average growing season is approximately 120-130 days but can vary considerable from year to year.

The winds are prevailingly from the west and northwest and are most severe during late winter or early spring. Winds of sufficient speeds to cause soil erosion can occur during any month. Occasionally hot winds during July and August will cause reduced crop yields.

The data included from the record of the U.S. Weather Bureau Station at Wibaux is fairly representative of the climate throughout the District.



LEGEND

GEOLOGIC FORMATION

Qal — RECENT ALLUVIUM: Stream deposited sands, gravels, silts and clay. 10-50 ft. thick.

Hydrologic Characteristics: Generally good quality water. Yields from 5 to 25 gpm.

Tfut — TONGUE RIVER MEMBER OF THE FORT UNION FORMATION: Buff to yellowish siltstones with interbedded shales and lignites. 325' thick.

Hydrologic Characteristics: Water occasionally mineralized. Yields from 5 to 15 gpm.

Tful — LEBO SHALE MEMBER OF THE FORT UNION FORMATION: Dark grey gumbo shales with some siltstones and lignites. 100-160' thick.

Hydrologic Characteristics: Water commonly highly mineralized. Yields from 5 to 10 gpm.

Kl — HELL CREEK & TULLOCK MEMBERS OF THE LANCE FORMATION: Shales and mudstones with interbedded tan to yellowish sandstones. 600-700' thick.

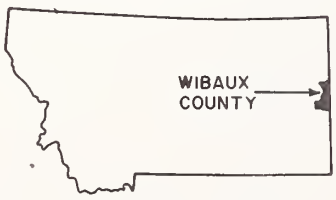
Hydrologic Characteristics: Good quality water; best in lower section. Yields from 4 to 30 gpm.

Kfh — FOX HILLS SANDSTONE: Yellow-brown to white sandstones. Upper Colgate Sandstone Member is a clean marine sand. Lower sands are shaley. 150-225' thick.

Hydrologic Characteristics: Good quality water. Yields 30 to 150 gpm.

Kp — PIERRE SHALE: Dark grey gumbo clay shale. 1180' ± thick.

Hydrologic Characteristics: Without water suitable for domestic or livestock use



LOCATION MAP

GENERALIZED GEOLOGY MAP WITH HYDROLOGIC CHARACTERISTICS

WIBAUX COUNTY

MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000

TRANSVERSE MERCATOR PROJECTION

SOURCE MATERIAL: AMS TOPOGS NL13-2, NL13-5

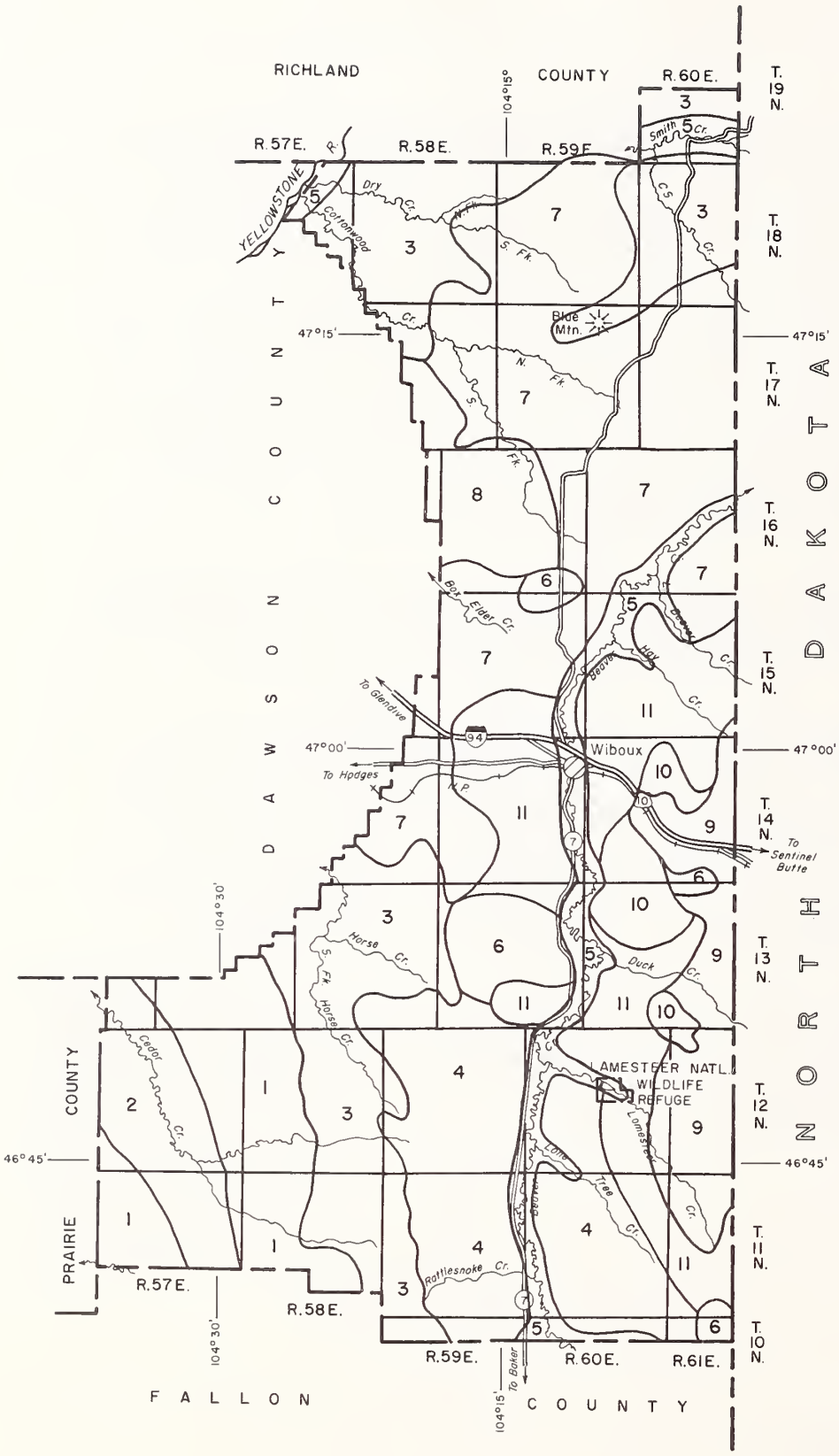
GEOLOGY

The geological history of the district includes long periods of sedimentation, regional uplift, erosion, and some glaciation. All the rocks exposed at the ground surface are of sedimentary origin and range in age from Cretaceous (65 to 135 million years old) to Recent (less than twenty thousand years old). During most of Cretaceous time thick sequences of marine sediments were deposited, followed by deposition of thick, continental, coal bearing sediments during Late Cretaceous and Early Tertiary time (50-70 million years old). This was followed by regional uplift and tilting of the rock layers gently to the northeast and subsequent erosion causing dissection of upland areas. Uplifting created a relatively narrow structure known as the Cedar Creek anticline, which bisects the southwest corner of the district.

Erosion has since removed almost all of the uplifted layers thereby bringing older and normally more deeply buried sedimentary formations closer to the surface. The Cedar Creek anticline is of economic importance due to oil fields along the structure.

During the Pleistocene epoch (20 thousand to one million years ago), continental ice sheets covered a small portion of extreme northwestern Wibaux County, causing the Missouri and Yellowstone Rivers to join at Intake, Montana and flow along the edge of the ice sheet across the northern boundary of the county. Glacial Lake Glendive was formed by the continental ice sheets, and as a result lake silts and clays were deposited in the tributaries of the Yellowstone River.

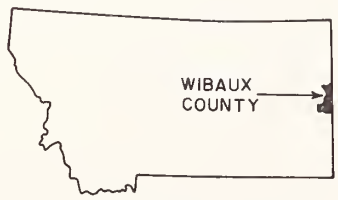
The occurrence and distribution of ground water is directly related to the geology of the district. Hydrologic characteristics of the various geologic formations are shown in the legend of the Generalized Geology Map.



LEGEND

1 RHOADS - FLASHER - CUSHMAN
2 PIERRE - LISMAS - RHOADS - MOLINE
3 BADLANDS - BAINVILLE - FLASHER - MIDWAY
4 MOREAU - MIDWAY - REGENT
5 FARLAND - SAVAGE - HARLEM
6 FLASHER - VEBAR
7 BAINVILLE - CHAMA - FLASHER
8 BAINVILLE - WIBAUX - CHAMA
9 MORTON - ARNEGARD - CHAMA
10 WIBAUX - MORTON - CHAMA - BAINVILLE - SEARING
11 CHAMA - MORTON - BAINVILLE - FLASHER

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.



LOCATION MAP

GENERAL SOIL MAP
WIBAUX COUNTY
MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000
TRANSVERSE MERCATOR PROJECTION
SOURCE MATERIAL: AMS TOPOGS NL13-2, NL13-5

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND, OREG. 1973

M7-0-23050A-L

SOIL ASSOCIATIONS

A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern. A map showing soil associations is useful to people who want a general idea of the soils in a survey area, who want to compare different parts of this area, or who want to know the location of large tracts that are suitable for a certain kind of land use. More detailed information on individual soils can be found in the Wibaux County Soil Survey report. Following is a description of the soil associations in the district.

Rhoades-Flasher-Cushman - Undulating to very steep, shallow to deep, well drained and excessively drained soils and claypan soils on shale and sandstone uplands.

Pierre-Lismas-Rhoades-Moline - Steep and very steep and undulating to strongly rolling, shallow, well drained soils on shale and sandstone uplands and on alluvial fans and terraces.

Badlands-Bainville-Flasher-Midway - Moderately steep through very steep, shallow, well drained soils and outcrops onshale and sandstone uplands.

Moreau-Midway-Regent-Sloping to very steep, shallow and moderately deep, well drained soils on shale and sandstone uplands.

Farland-Savage-Harlem - Nearly level and gently sloping, deep, well drained soils on low terraces and flood plains.

Flasher-Vebar - Gently sloping through strongly sloping, shallow through deep, well drained and excessively drained soils on shale and sandstone uplands.

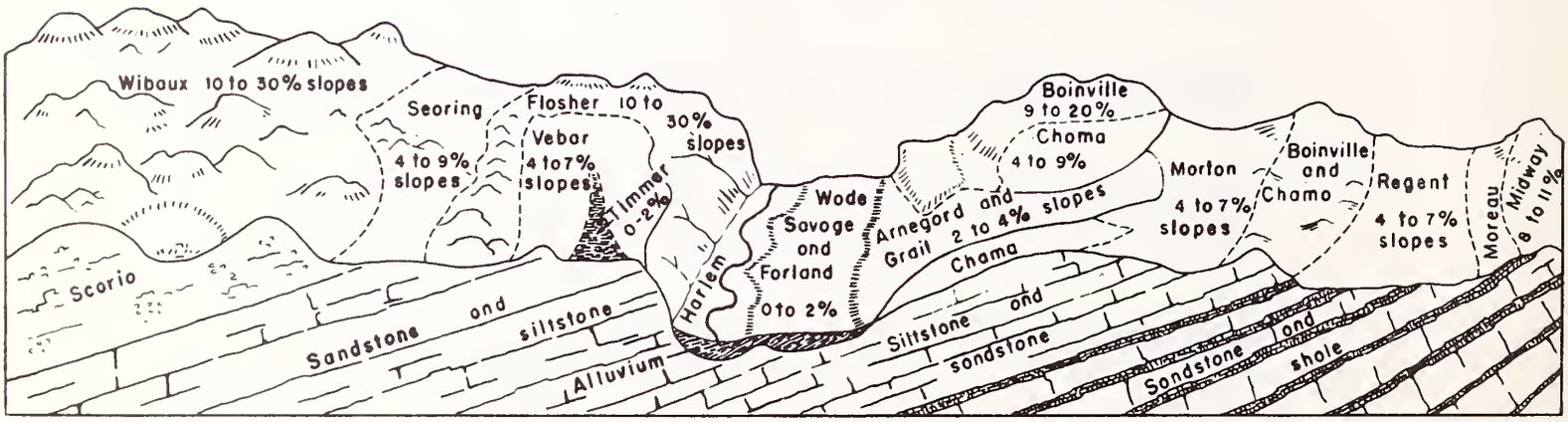
Bainville-Chama-Flasher - Gently sloping to steep moderately deep and deep well drained and excessively drained soils on shale and sandstone uplands.

Bainville-Wibaux-Chama - Gently sloping to steep, shallow to deep, well drained soils on red shale and sandstone uplands.

Morton-Arnegard-Chama - Nearly level to sloping, deep, well drained soils on shale and sandstone uplands.

Wibaux-Morton-Chama-Bainville-searing - Gently sloping to steep, shallow to deep, well drained soils on red shale and sandstone uplands.

Chama-Morton-Bainville-Flasher - Gently sloping to steep, shallow excessively drained and moderately deep and deep well drained soils on shale and sandstone uplands.



How the soils common in Wibaux County occur in relation to each other. The percentage of slope is shown under the soil name.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA SCS-PORTLAND, OREG. 1973

SCS PHOTO

SCS PHOTO

ACREAGE BY LAND CAPABILITY, CLASS, & SUB-CLASS*
PRIVATE & STATE OWNED LANDS**

	Cropland	Range	Pasture	Woodland	Other	Total	% by Land Class
Class 2e	4047	208	0	0	357	4612	
2w	0	3121	0	0	0	3121	
2c	36891	14775	0	0	1804	53407	
Total Class 2	40938	18104	0	0	2161	61203	12
Class 3e	89627	45778	1743	529	2443	140120	
3s	0	625	0	0	0	625	
Total Class 3	89627	46403	1743	529	2443	140745	26
Total Class 4	13146	15397	3918	0	582	33043	6
Class 6e	19113	190238	3048	2383	1014	215796	
6w	1327	9364	0	500	0	11191	
6s	0	1665	4791	0	0	6456	
Total Class 6	20440	201267	7839	2883	1014	233443	44
Class 7e	0	12069	0	0	0	12069	
7s	0	11029	0	1588	0	12617	
Total Class 7	0	23098	0	1588	0	24686	5
Total Class 8	0	41154	0	0	0	41154	7
GRAND TOTAL	164151	345423	13500	5000	6200	534274	

* Wibaux County Conservation Needs Inventory

** 34,686 Acres of Federal Land, Urban & Built-up and Small Water Areas Not Included

LAND CAPABILITY CLASSIFICATION

The capability classification is a practical grouping of soils. Soils and climate are considered together as they influence use, management, and the kinds of crops that can be grown. The classification contains two general divisions: (1) Land suited for cultivation and other uses, and (2) Land limited in use and not best suited for cultivation. Each of these broad divisions has four classes. The hazards and limitations in use increase as the class number increases. Capability classes are divided into subclasses. These show the principal kinds of problems involved. The subclasses are: "e" for erosion, "w" for wetness, "s" for soil, and "c" for climate, short growing season or drouthy conditions.

Land Suited For Cultivation And Other Uses

Class 1 Soils in Class 1 have few or no limitations or hazards. They may be used safely for growing a wide variety of cultivated crops, for pasture, range, woodland, and wildlife. There are no class 1 lands in the district due to climatic limitations.

Class 2 Soils in Class 2 have few limitations or hazards. Simple conservation practices are needed when cultivated. They are suited for cultivated crops, pasture, range, woodland, wildlife.

Class 3 Soils in Class 3 have more limitations and hazards than those in Class 2. They require more difficult or complex conservation practices when cultivated. They are suited for cultivated crops, pasture, range, woodland, and wildlife.

Class 4 Soils in Class 4 have greater limitations and hazards than Class 3. Still more difficult or complex measures are needed when cultivated. They are suited for growing cultivated crops, pasture, range, woodland and wildlife.

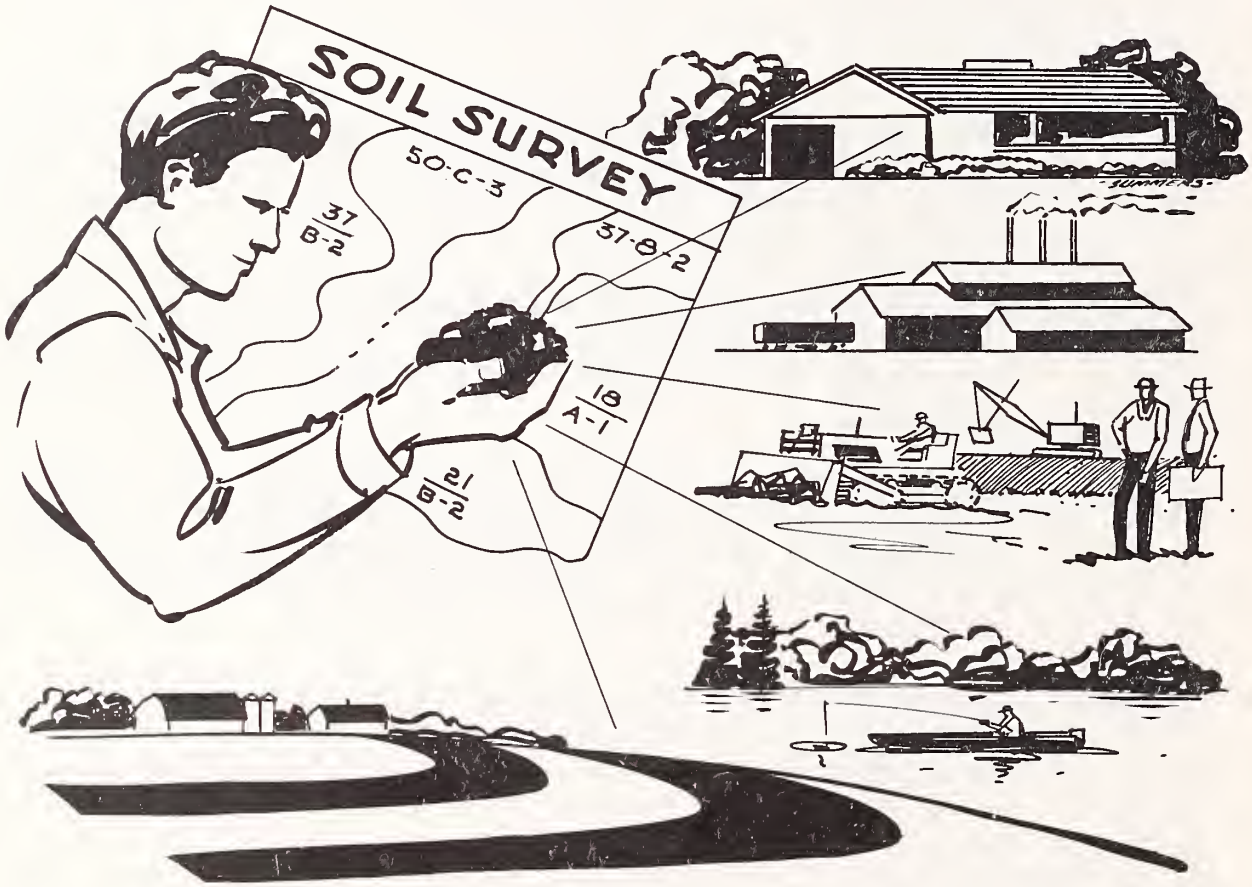
Land Limited In Use—Generally Not Suited for Cultivation

Class 5 Soils in Class 5 have little or no erosion hazard but have other limitations that prevent normal tillage for cultivated crops. They are suited for pasture, range, woodland and wildlife. There are no Class 5 lands in the District.

Class 6 Soils in Class 6 have severe limitations or hazards that make them unsuited for most cultivation. They are suited generally for pasture, range, woodland, and wildlife.

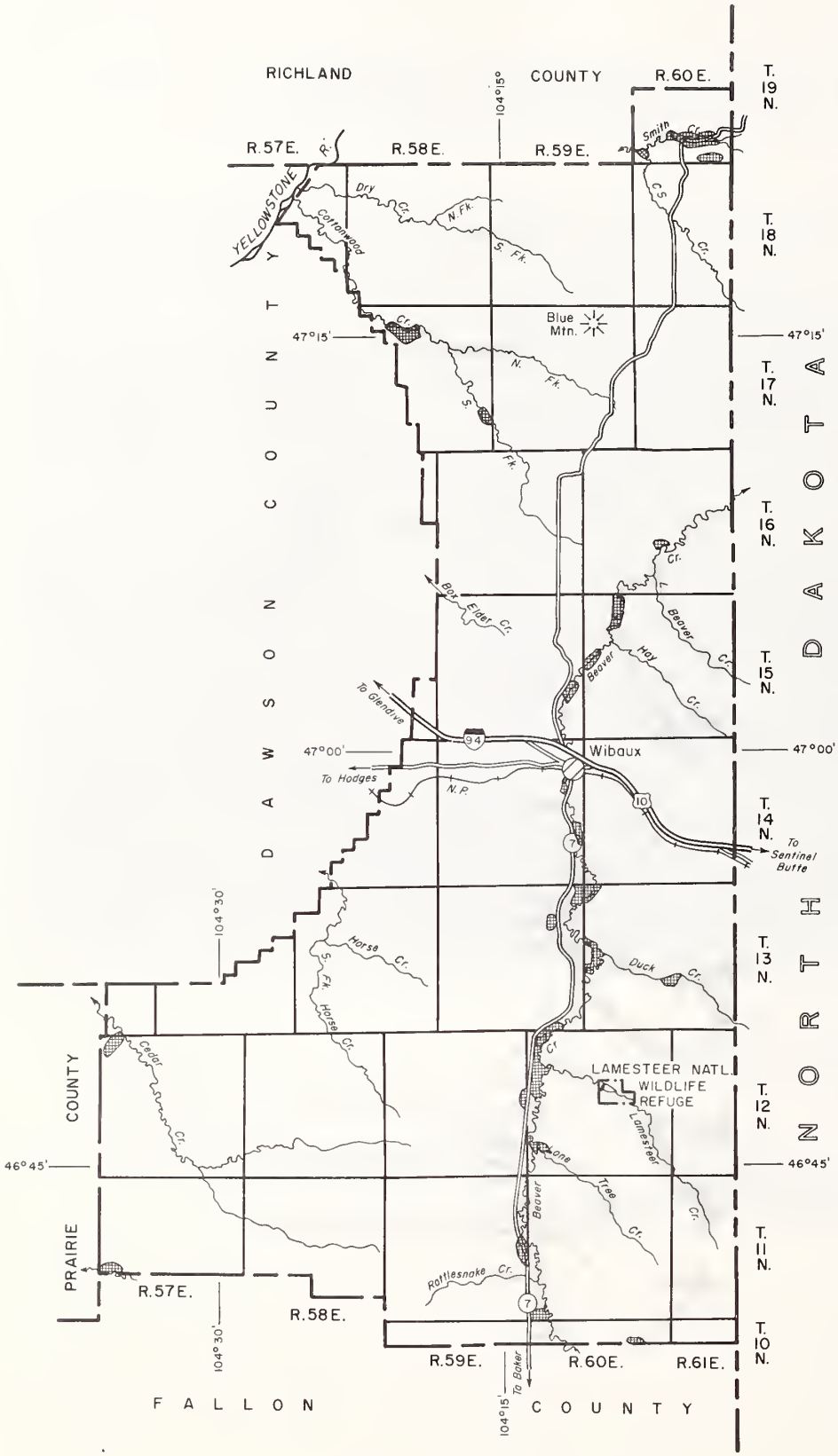
Class 7 Soils in Class 7 have very severe limitations or hazards that make them generally unsuited for cultivation. They are suited for range, woodland, and wildlife.

Class 8 Soils and land forms in Class 8 have limitations and hazards that prevent their use for cultivated crops, pasture, range, or woodland. They may be used for recreation, wildlife and water supply.



THE LAND-CAPABILITY CLASSES

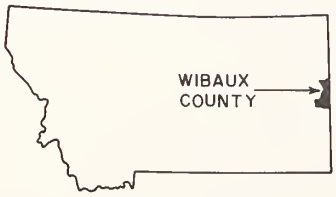
SCS PHOTO



LEGEND

EXISTING WATERSPREADING AREAS

POTENTIAL WATERSPREADING AREAS



LOCATION MAP

WATERSPREADING AREAS
WIBAUX COUNTY
MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000
TRANSVERSE MERCATOR PROJECTION
SOURCE MATERIAL: AMS TOPOGS NL13-2, NL13-5

WATER RESOURCES

The water resources of the District are one of its most important assets. Water is essential for domestic, agricultural, industrial, wildlife, and recreation uses. As demand for these various uses increase, planning for the use and development of water in the district will become an important consideration.

Surface Water

The use of surface water is widespread for agricultural and recreational purposes. Because of the extremes in precipation, the supply of surface water varies considerably from year to year. The following table shows stream gauge maximum-minimum readings occurring during a 20 year period on Beaver Creek.*

STREAM	GAGING STA. LOCATION	DRAINAGE** AREA SQ. MI.
Beaver Creek	at Wibaux	351

DISCHARGE (CFS)					20 Yrs.	Runoff - (1000 Acre Ft.)			
MAX.	DATE	MIN.	DATE	AVG.	Averaged	MAX.	DATE	MIN.	DATE
3,780	3/2/39	Flow	Times	25.6		44,490	1944	1,030	1956

* "Water resources Survey Wibaux County, Montana," Montana Water Resources Board, Helena, Montana 1960

**Irrigations diversions occur above this station

The town of Wibaux is located on the flood plain of Beaver Creek and is subject to occasional flood damage from spring snow melt or heavy summer rainstorms. The most damaging flood occurred in June, 1929 when three persons lost their lives and the entire business district was flooded with six to eight feet of water.

The main drainages to the Yellowstone in the western portion of the District are: Smith Creek, C.S. Creek, Dry Creek, Cottonwood Creek, Horse Creek, and Cedar Creek. They are all well incised, narrow, steep drainages of approximate equal size.

There are an estimated 600 small reservoirs located throughout the District. These provide water for livestock, wildlife, and recreation uses.

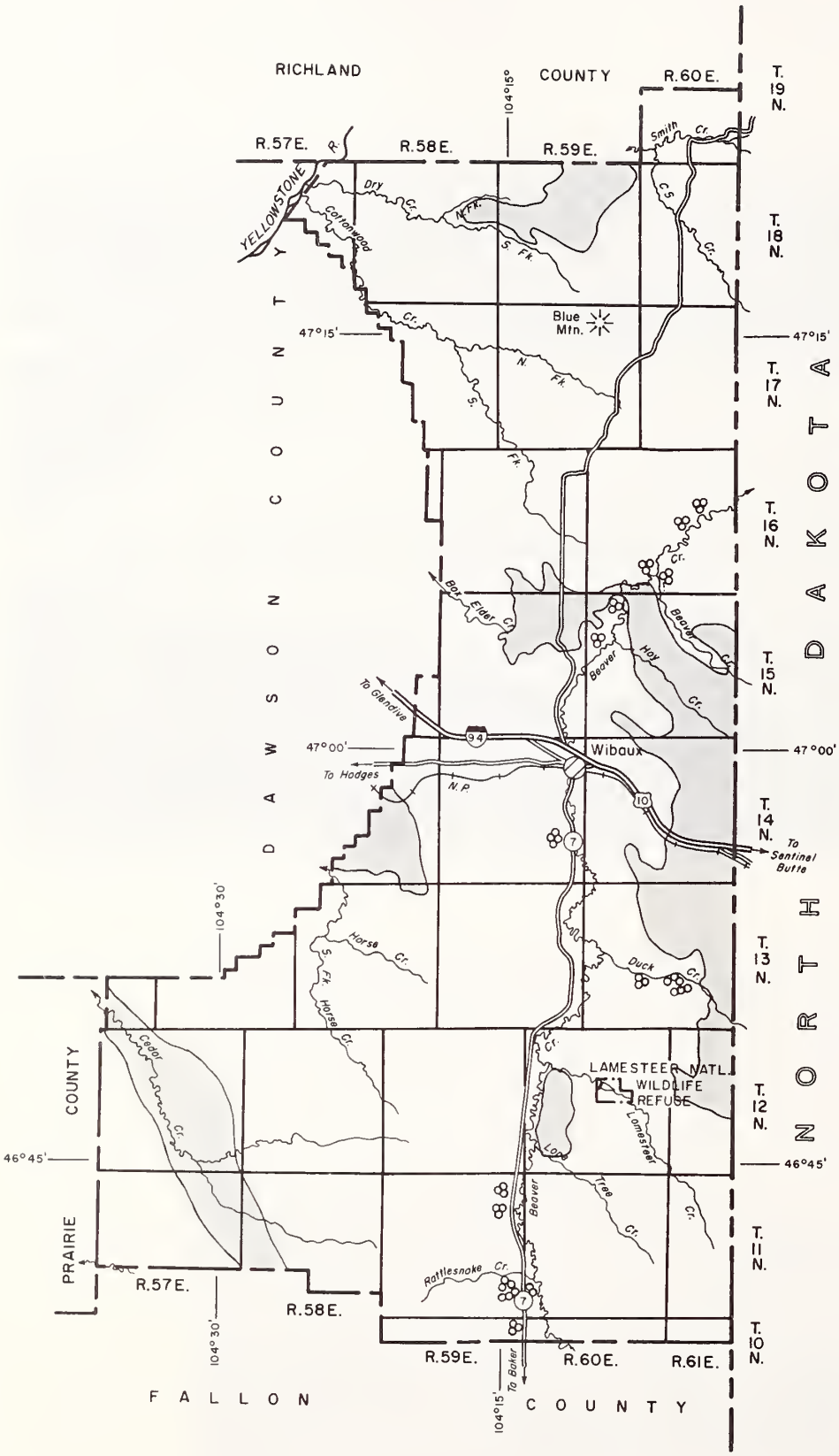
There are no irrigation projects in the District which provide a season long supply of irrigation water. There are however an estimated 1,700 acres of individual waterspreading systems. The map on the previous page refers only to these type projects. These are located principally along Beaver Creek and the larger side drainages. They consist of a diversion structure or pumps along with a series of dikes to control the spread of water over the land. These systems function only during spring run-off or heavy summer rains. They are generally used for hay production and provide stability and increased yields to the hay base needed to maintain the livestock industry. Hay production maybe increased up to five times present production under these systems. Based on the soil survey report, an additional 20,000 acres are suitable for waterspreading development if adequate water is available.

Ground Water

Water wells and springs provide an important source of domestic and livestock water. There are an estimated 600 wells and springs developed in the District. The town of Wibaux is presently supplied by four wells with a combined yield of 250 gallons per minute. At lower elevations in the District wells may flow under artesian pressure from the Fox Hills Formation. Hydrologic characteristics of the various geologic formations are shown in the legend on the Generalized Geology Map.

SCS PHOTO

SCS PHOTO



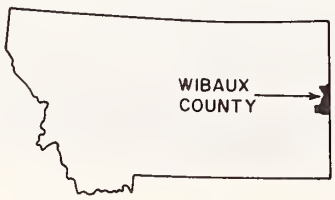
LEGEND

MAJOR STRIPPABLE COAL DEPOSITS

PINE UNIT OIL FIELD

GRAVEL DEPOSITS

SOURCE: Montana Bureau of Mines and Geology
Montana Department of Natural Resources and Conservation, Oil and Gas Conservation Division



LOCATION MAP

MINERAL RESOURCE MAP
WIBAUX COUNTY
MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000
TRANSVERSE MERCATOR PROJECTION
SOURCE MATERIAL: AMS TOPOGS NL 13-2, NL 13-5

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND, OREG 1973

M7-0-23050J-L

MINERAL RESOURCES

Oil and gas production are confined to the Pine Unit field located in the southwestern corner of the district. This field was discovered in July 1951. In 1972 there were 76 producing wells in the district. The following table shows oil and gas production from 1967 through 1972.*

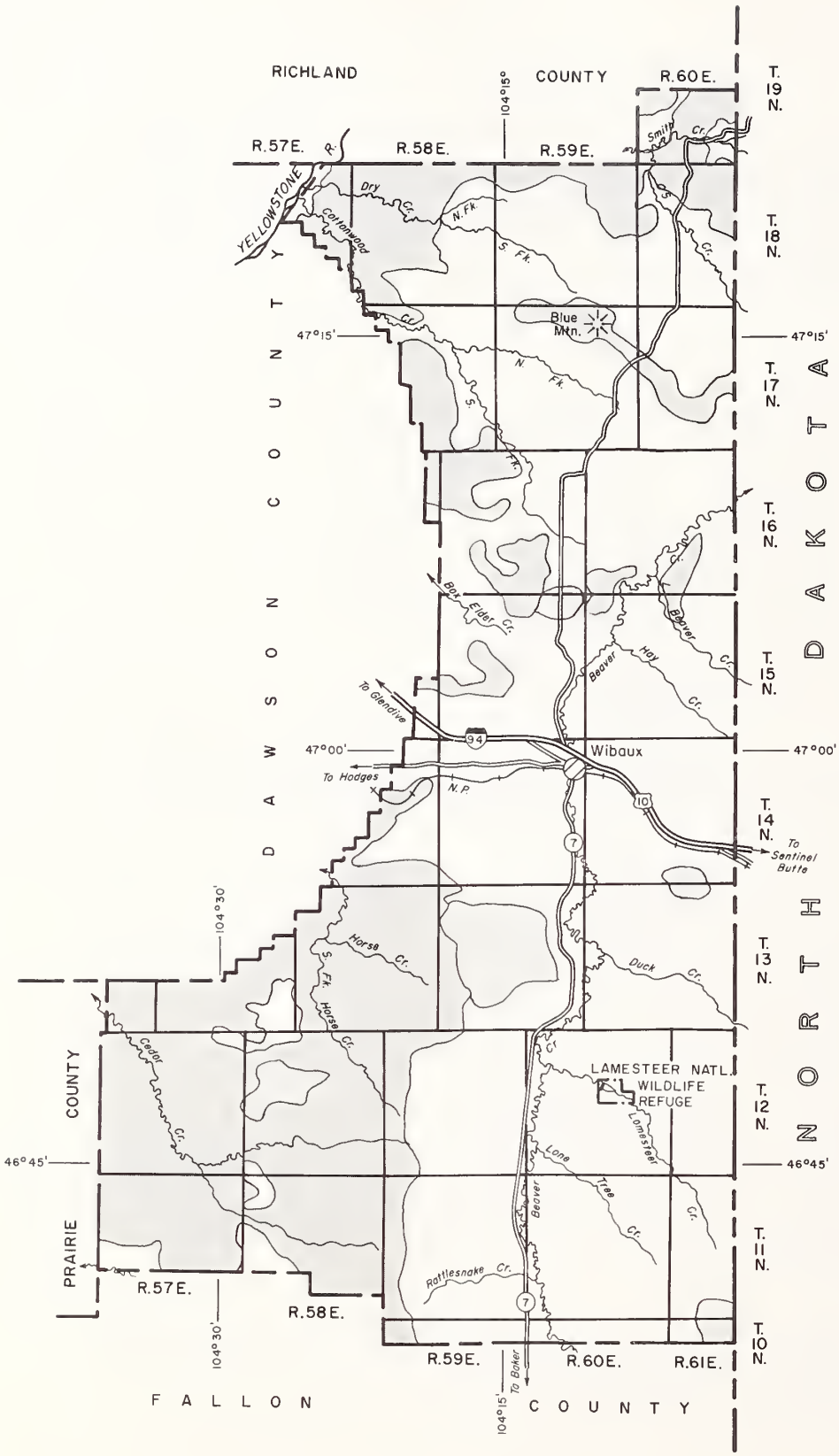
	Oil Barrels	Gas Million Cubic Feet	Gross Value
1967	2,885,932	941,005	$7,552,848
1968	2,762,307	435,476	7,260,267
1969	2,561,798	382,940	7,082,110
1970	2,373,888	331,747	6,700,848
1971	2,218,454	353,520	6,827,430
1972	2,062,300	322,100	6,394,696

*Wibaux County Courthouse

The net proceeds tax from oil and gas represented approximately 47 per cent of the taxable valuation of the district in 1972.

Coal is the most extensive mineral resource in the District. Although there is no strip mining activity at the present time, considerable acreage has been leased for coal development. All but the southwestern portion of the District lies within the Fort Union Coal Region. There are over 7 billion tons of lignite coal in the District based on estimates by the Montana Bureau of Mines and Geology. Of this amount, it is estimated that 1.7 billion tons are strippable. These strippable coal beds have a minimum thickness of 6 feet, overlain by 150 feet or less of overburden. The area underlain by strippable coal deposits totals approximately 68,000 acres or 12% of the land area. The largest area of strippable coal is located along the North Dakota border in the east-central portion of the District.

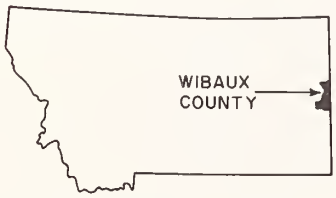
There are small quantities of sand and gravel located along Beaver Creek, however these deposits are not found in quantities suitable for commercial production.



LEGEND

SEVERE WATER EROSION

SEVERE WIND EROSION



LOCATION MAP

SOIL EROSION HAZARD MAP
WIBAUX COUNTY
MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000

TRANSVERSE MERCATOR PROJECTION

SOURCE MATERIAL: AMS TOPOGS NL13-2, NL13-5

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA SCS-PORTLAND, OREG. 1973

M7-0-23050H-L

SEVERE EROSION HAZARD AREAS

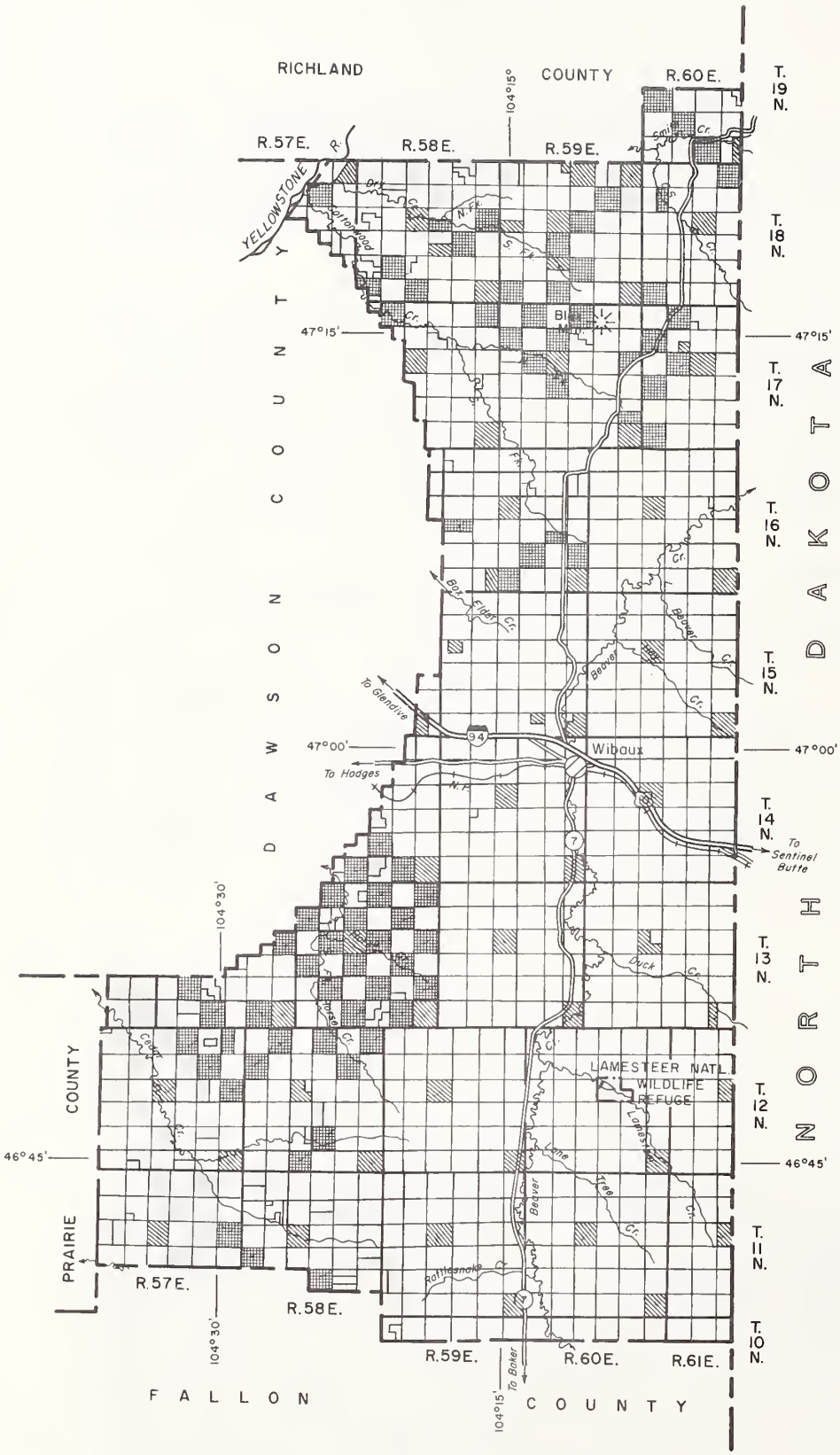
Soil erosion in the District by wind or water occurs in a pattern similar to that of other areas in Eastern Montana. Because soils vary significantly in their susceptibility to erosion, those areas with severe erosion hazards have been delinated. These delinations are based on soil characteristics such as slope, permeability, surface texture and plant cover.

Soils with severe water erosion hazards are the steep to very steep shallow soils including some areas of exposed sandstone and shale. Run-off from these areas is very rapid. Approximately 35 per cent of the soils in the district are included in this grouping. Since these areas are used primarily for grazing, intensive management of the grass cover is essential to minimize erosion. Parts of these areas are subject to some natural geologic erosion.

Although not shown on the map, streambank and gully erosion do occur along many of the major drainageways throughout the District, especially along the lower end of Beaver Creek.

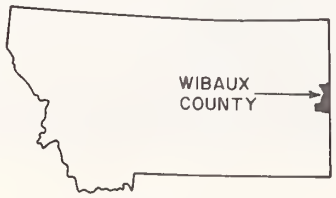
Because of the variable extremes in rainfall, many of the soils in the District are subject to wind erosion when cultivated unless protected by control measures. The areas delinated as having a severe hazard from wind erosion are the sandier soils. Approximately 3 per cent of the soils are included in this grouping. When these areas are cultivated intensive control measures are required to control wind erosion.

SCS PHOTO



LEGEND

- BUREAU OF LAND MANAGEMENT
- STATE LANDS
- B. N. RAILROAD
- PRIVATE



LOCATION MAP

LAND OWNERSHIP MAP
WIBAUX COUNTY
MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000
TRANSVERSE MERCATOR PROJECTION
SOURCE MATERIAL: AMS TOPOGS NL13-2, NL13-5

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND, OREG. 1975

M7-0-23050C-L

LAND OWNERSHIP

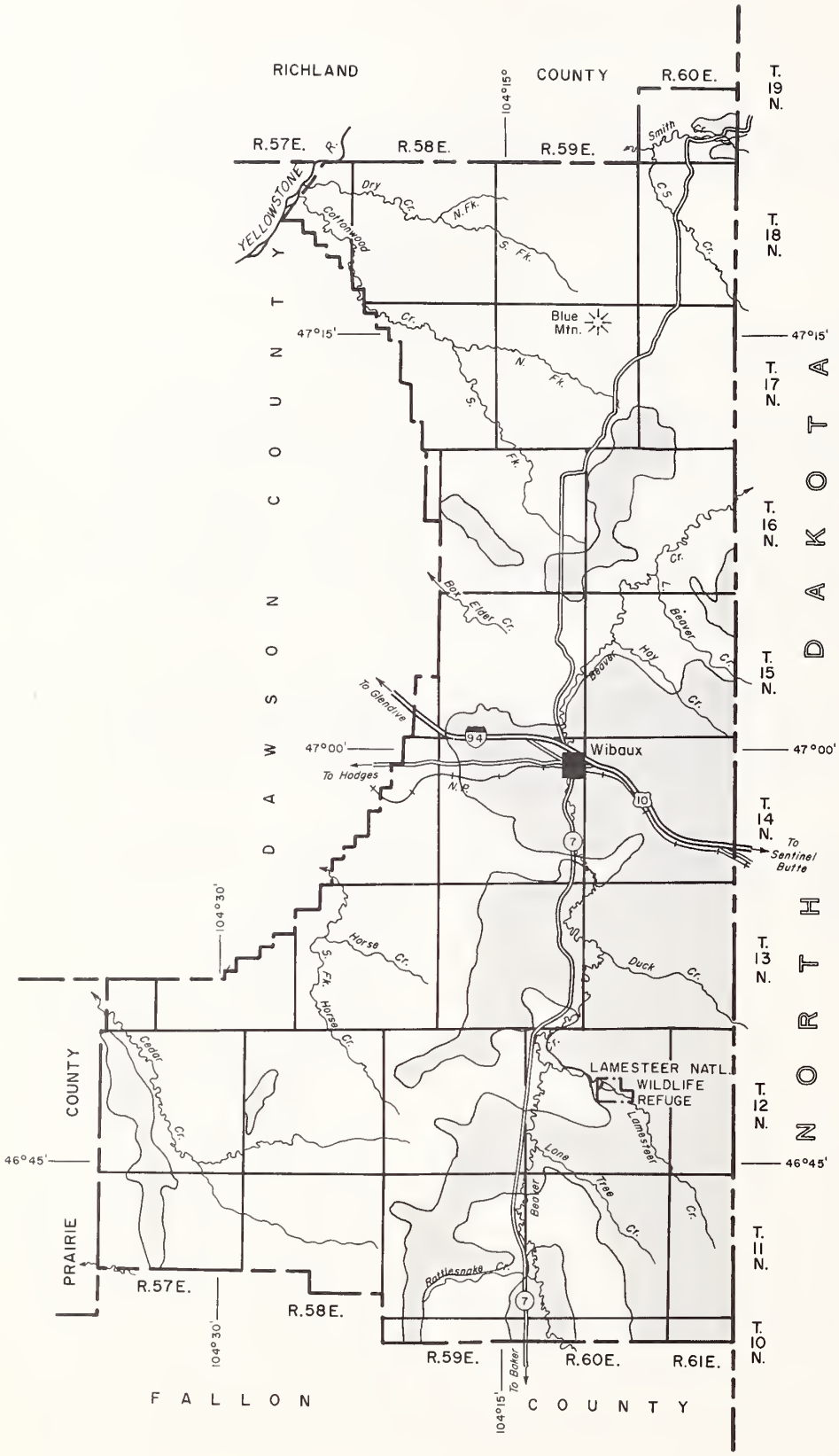
The land ownership pattern of the district is shown on the land ownership map. The approximate ownership of this land is as follows:

	Acres
Private	509,892
State of Montana	32,670
Bureau of Land Management	26,398

Private ownership accounts for about 90% of the land in the District. The Burlington-Northern Railroad owns 39,680 acres or approximately 8% of the private lands. It is estimated from local records that 30% of the private land in the district is owned by individuals or corporations residing outside of the district. These lands are usually leased to local operators. There are approximately 15 small ownership tracts in the district. These are generally located around the town of Wibaux.

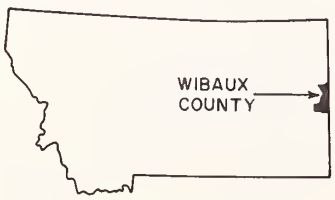
The Federal lands (4%) administered by the Bureau of Land Management occur in scattered tracts throughout the northern half and southwestern portions of the District. These lands are used for grazing.

State lands (6%) are commonly found in sections 16 and 36 of each township. These lands are commonly leased to local operators for ten year periods.



LEGEND

- OVER 75% RANGELAND
- OVER 75% CROPLAND
- OVER 75% GRAZABLE WOODLAND
- URBAN AND BUILT-UP



LOCATION MAP

LAND USE MAP
WIBAUX COUNTY
MONTANA
OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000
TRANSVERSE MERCATOR PROJECTION
SOURCE MATERIAL: AMS TOPOGS NL13-2, NL13-5

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND OREG. 1973

M7-0-23050K-1

LAND USE

Prior to 1900 nearly all of the land in the district was used for livestock grazing. During the period from 1900 - 1914, homesteaders settled the area and started dryland farming operations. Presently approximately 96% of the land is used for the production of crops and livestock. The district has not experienced any major land use changes in the past 15 years. During the period from 1958 to 1967, there was a slight increase in rangeland and pasture acreage with a corresponding decrease in cropland. The following table shows a breakdown of various land uses taken from the 1967 Conservation Needs Inventory.

	Acres	%
Rangeland	371,821	65
Dry Cropland	142,257	25
Pasture and Hayland	35,394	6
Forest land	5,000	4
Other land	6,200	
Urban and Built-up Areas	7,000	
Small Water Areas	1,288	

Rangeland constitutes the largest single land use in the District. These lands provide the primary resource for supporting the livestock industry.

Dry cropland is used primarily for the production of cereal grains produced under an alternate crop-fallow system.

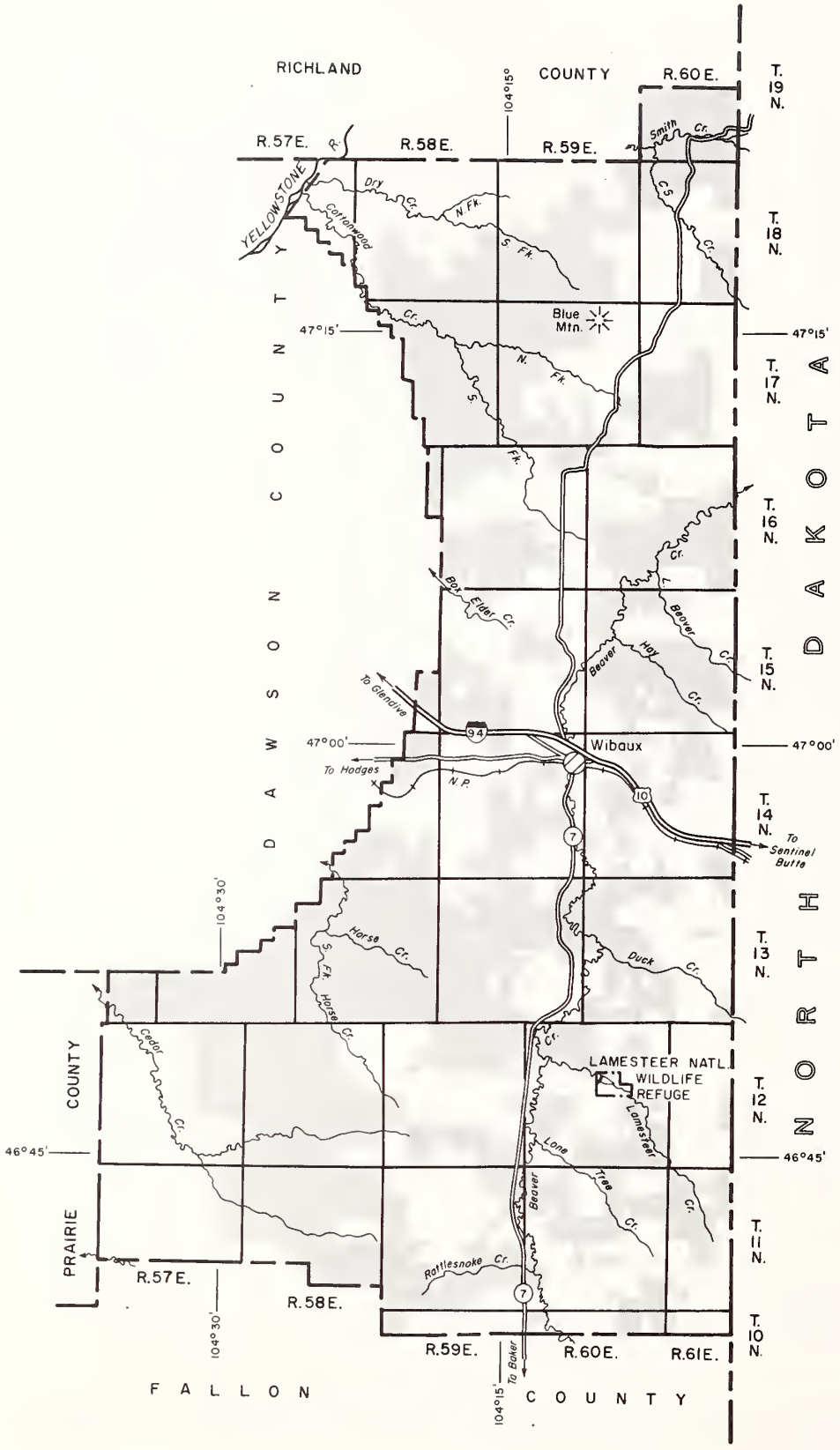
Hay and pasture consist of tame grasses used to supplement livestock feed and forage and are used interchangeably depending on the need.

Forest land consists of timber areas found along major drainages and in the Pine Unit area in the southwestern portion of the District. These lands are used for grazing with no commercial timber harvest.

Other land includes farmsteads, farm roads, rural non-farm residences, investment tracts, country churches, schools, cemetaries, and small stock ponds and reservoirs less than two acres in size.

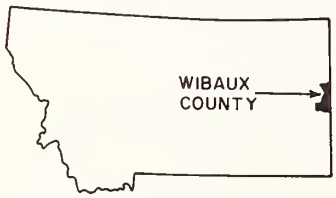
Urban and built-up areas in the District includes towns and other built-up areas of more than 10 acres such as highways, roads, railroads, and industrial sites.

Small water areas are ponds, reservoirs and lakes that are from two to forty acres.



LEGEND

AREAS UNDER CONSERVATION PLAN



LOCATION MAP

CONSERVATION PLANNING PROGRESS MAP

WIBAUX COUNTY

MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000
TRANSVERSE MERCATOR PROJECTION
SOURCE MATERIAL: AMS TOPOGS NL 13-2, NL 13-5

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS PORTLAND, OREG. 1973

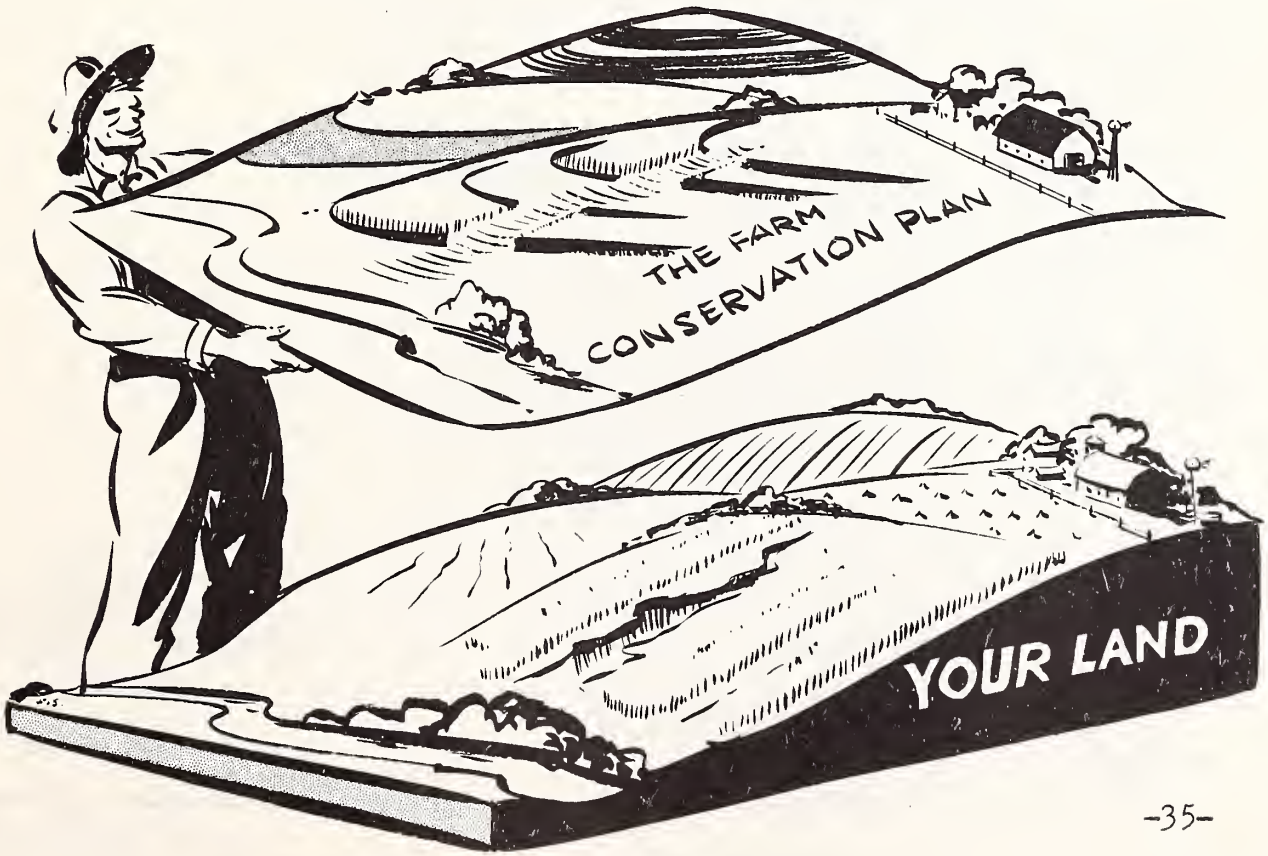
M7-0-23050E-L

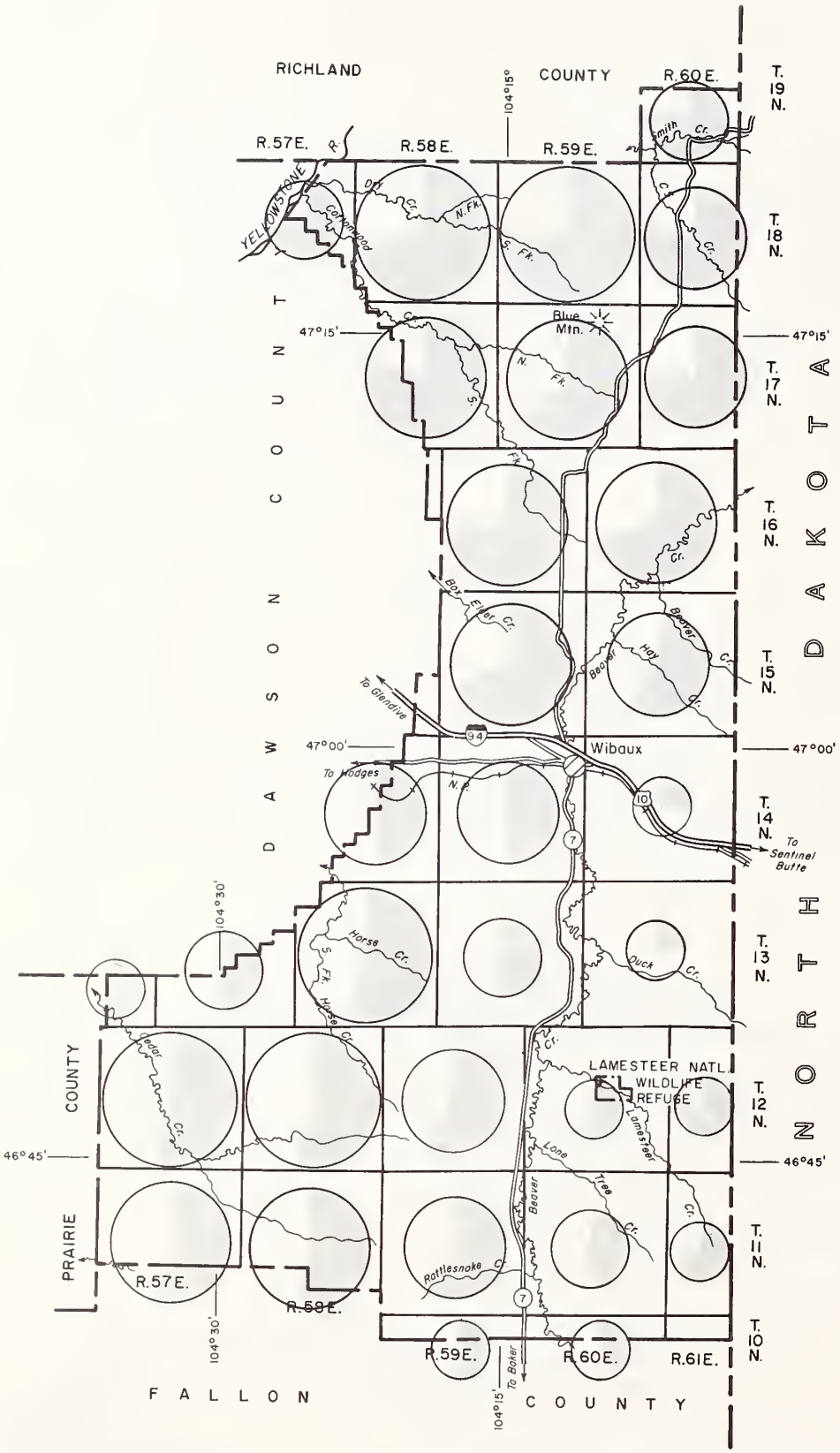
CONSERVATION PLANS

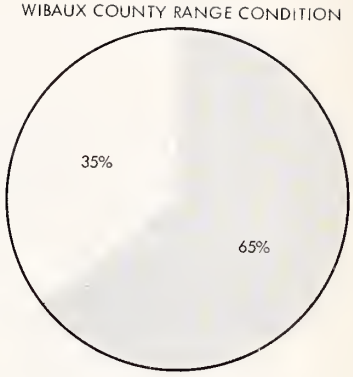
Approximately 134 operators have signed cooperative agreements with the District and have completed conservative plans for the development and management of the natural resources. This totals approximately 333,000 acres or 59% of the land area in the district. These planned acres occur uniformly throughout the District as shown on the Conservation Planning Map and in approximate proportion to land use. Because of changes in land use, land ownership and consolidation of operating units, there is a continuing need for revisions of these plans as well as the need to expand planned conservation to each acre in the District. The following table shows district conservation plans by age distribution.

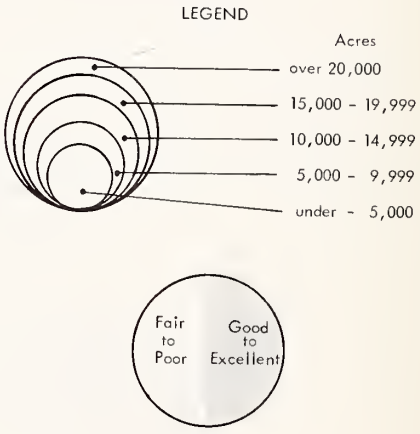
	No.	Percent of Total
Plans less than 5 years of age	31	23
Plans 5 to 10 years of age	34	25
Plans over 10 years of age	69	52

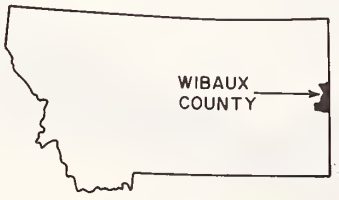
Of the 134 conservation plans, 48 were developed under the Great Plains Conservation Program started in 1958. There are 93 operating units in the district who do not have conservation plans on their units.











LOCATION MAP

RANGE RESOURCE MAP
WIBAUX COUNTY
MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000
TRANSVERSE MERCATOR PROJECTION
SOURCE MATERIAL: AMS TOPOGS NL 13-2, NL 13-5

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND, OREG. 1973

M7-0-23050L-L

RANGE AND PASTURE

Rangeland is made up of soils on which the plant cover is a combination of native grasses, forbs, and shrubs. These lands provide forage for livestock, wildlife habitat, protection of soil from erosion, watersheds, recreation opportunities, natural beauty, and areas for future development. There are approximately 371,900 acres of rangeland in the District accounting for 65% of the land use. Of this total, 319,600 acres or 86% are under private ownership, 26,400 acres or 7% are federal lands administered by the Bureau of Land Management, and 25,900 acres or 7% are under state ownership.

Rangelands within the district are grouped into three broad classifications as follows:

A. Soil groups that can produce more herbage than ordinary range uplands because of superior soil moisture availability. Approximately 4% of the rangeland is included in this group.

B. Soil groups with no obvious soil or moisture limiting factors where vegetation can make a normal response to climate. Approximately 57% of the rangeland is included in this group.

C. Soil groups with characteristics or topographic features that limit moisture-holding capacity or affect infiltration rates. Approximately 39% of the rangeland is included in this group.

Range condition is the present composition of vegetation of a range site in relation to the potential plant community for that site. Range condition studies show that approximately 65% of the range in the district is in good to excellent condition and 35% in fair to poor condition. Heavy use over a long period reduces the vigor of the plants and may result in their elimination. Grazing animals are selective and grazing pressure is heaviest on the most palatable plants, which are eventually grazed out if overuse of a range area is prolonged.

It is estimated that in its present condition the rangeland will provide approximately 77,000 animal unit months of grazing. With proper range improvement practices to improve range condition, it is estimated that this figure could increase to 99,000 animal unit months of grazing.

Cost and return studies of different levels of range management carried out by ranchers throughout the area proves that good range management has a tremendous economic impact. Range in good condition will net about $1.15 more return per acre than fair condition range.

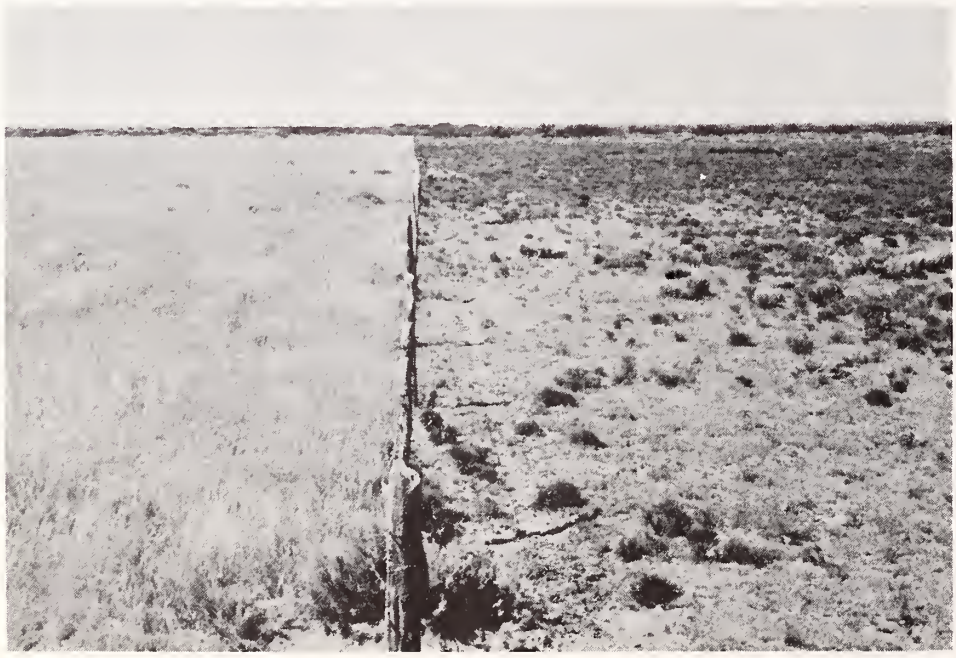
Approximately 15% of the rangeland is Class II and III land and is suitable for cultivation, however many of these areas occur in small isolated or irregular tracts that are presently not economical to farm.

There are approximately 13,500 acres of tame pasture which is used to provide supplemental grazing especially during the early spring months. Tame pastures consist of introduced tame grasses which are best adapted to grazing during certain growing seasons. There is a ratio of 1 acre of tame pasture for each 27.5 acres of rangeland.

The raising of cattle and sheep are the main livestock enterprises. As shown in the following table, livestock numbers have shown a gradual increase since 1964.*

	1972	1970	1968	1966	1964
Cattle & Calves	24,300	23,000	24,000	23,400	21,600
Stock Sheep & Lambs	9,500	8,500	7,500	7,200	8,500
TOTAL	33,800	31,500	31,500	30,600	30,100

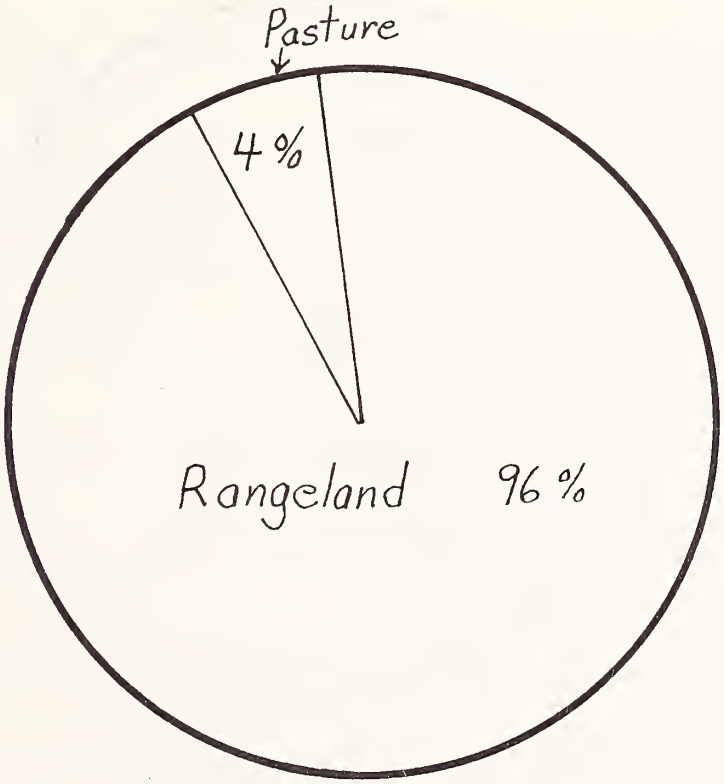
* Montana Agricultural Statistics

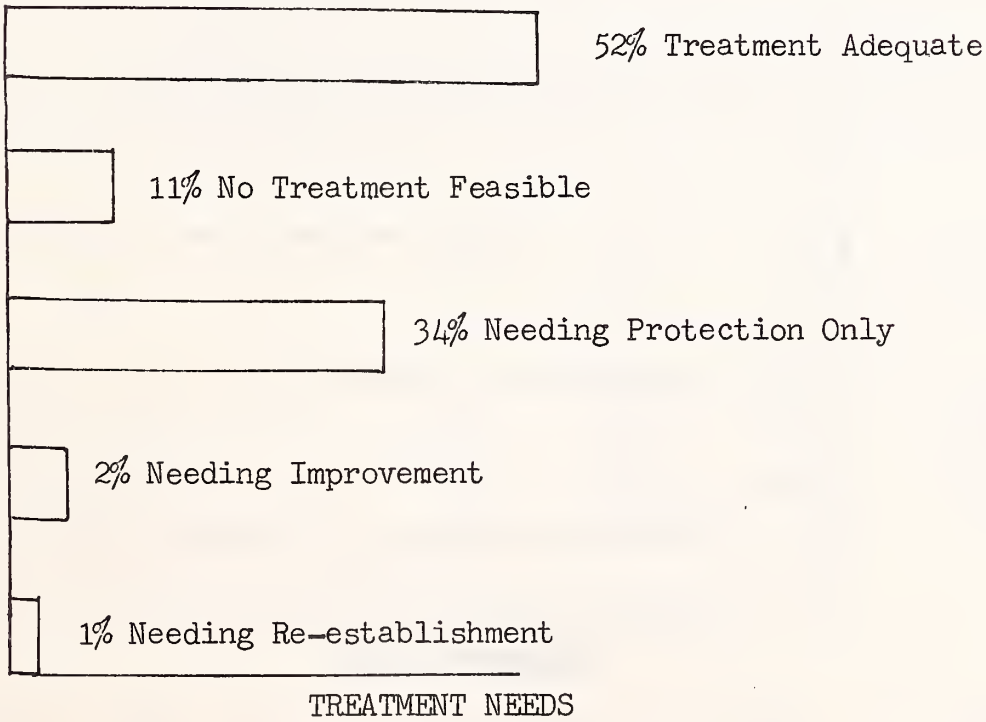


SCS PHOTO

RANGE and PASTURE

CONSERVATION TREATMENT NEEDS

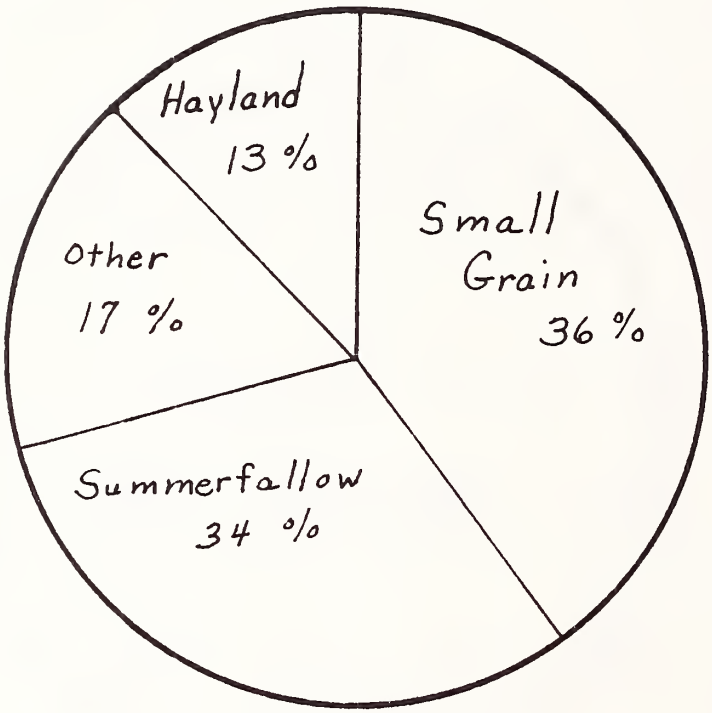


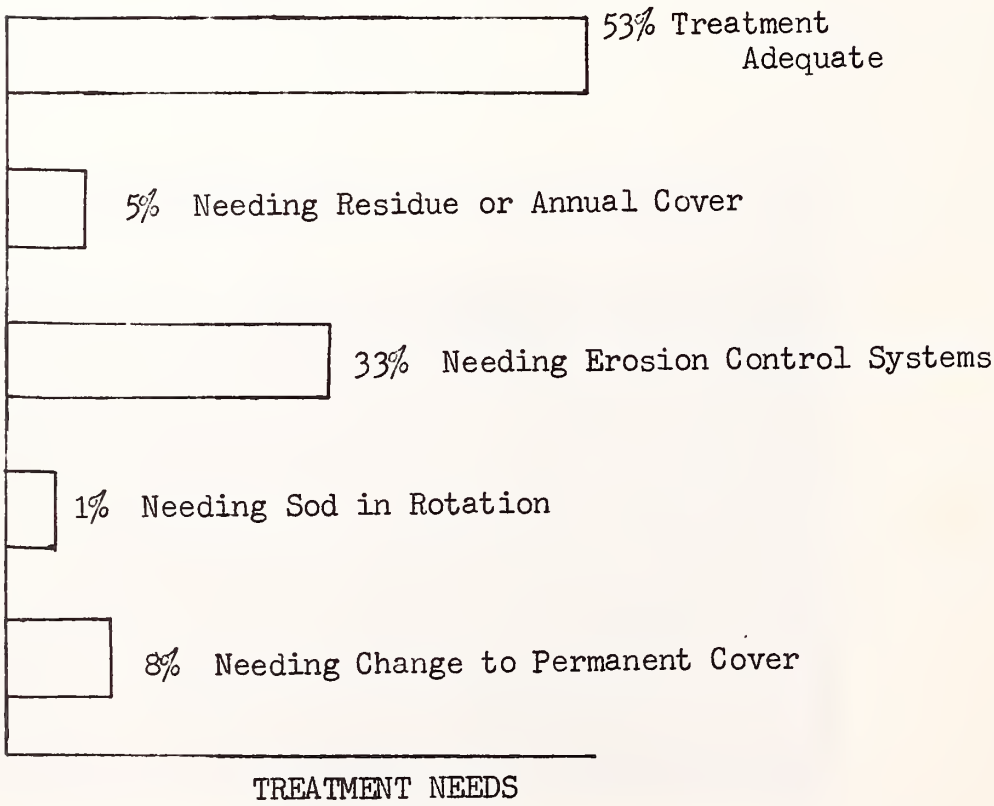


Source: 1967 Conservation Needs Inventory - Wibaux County

CROPLAND

164,151 Acres





Source: 1967 Conservation Needs Inventory - Wibaux County

DRY CROPLAND

The major crops grown in the district are wheat, barley, oats, corn and alfalfa hay. Other crops include small acreages of safflower, flax and rye.

Following is a tabulation of crops by acres for 1971.*

Crop	Acres Harvested
Winter Wheat	31,000
Durum Wheat	2,100
Other Spring Wheat	42,700
Barley	5,200
Oats	3,400
Alfalfa Hay	3,700
Corn	1,600

*Montana Agricultural Statistics

There has been a trend in the past five years to devote more acreage to wheat. Wheat acreage increased by approximately 20% from 1968 to 1971 due primarily to changes in farm programs.

Dryland crop yields vary considerably from year to year due to variations in rainfall and temperatures. Low rainfall received at the right time and coupled with cool temperatures can produce comparable yields of crops to years having five to six inches more rainfall.

Conversely, years having 12-14 inches of precipitation (a normal year) may produce poor yields if the moisture falls as a series of light showers. Hail storms are common in the district. Nearly every year, crops in some part of the district receive hail damage. The following table shows the variability of crop yield in the district over a period of selected years.*

Growing Season Precip.	15.43"	17.73"	11.09"	14.95"
CROP	1973**	1970	1967	1964
Winter Wheat-bu/ac.	37.0	24.0	32.0	24.0
Spring Wheat-bu/ac.	32.0	21.3	24.0	18.5
Barley-bu/ac.	42.0	31.2	36.0	26.5
Oats-bu/ac.	45.0	37.8	36.0	30.5
Alfalfa Hay tons/ac.	1.60	1.72	1.50	1.14

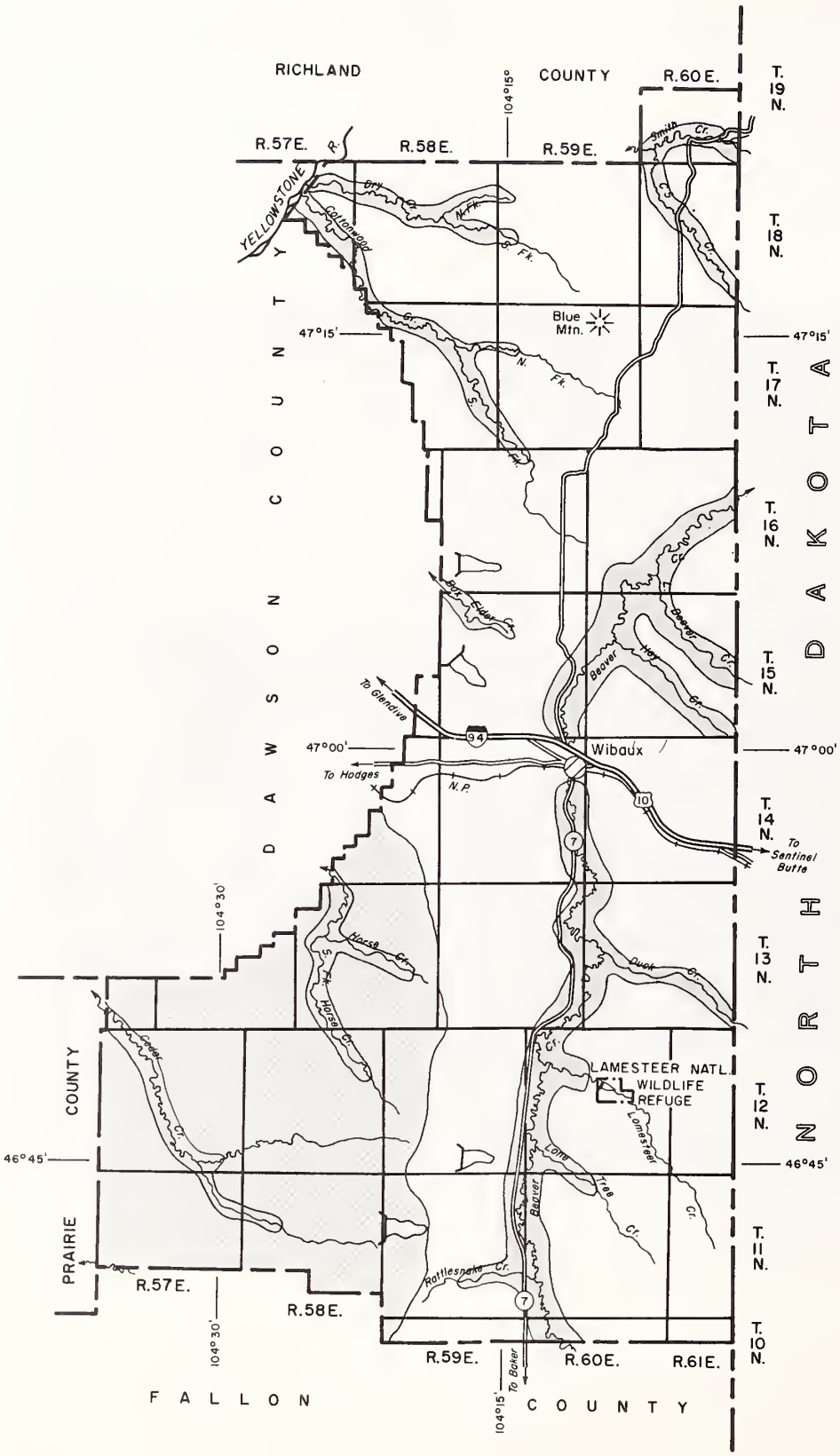
* Montana Agricultural Statistics
** 1973 Yield data estimated from local sources

The typical dryland cropping system used in the district is alternate small grain-fallow. Occasionally corn will be substituted for the fallow operations.

A number of producers are using commercial fertilizers. Both nitrogen and phosphate are commonly used in blends of 11-48-0 and 18-46-0 applied at an average rate of 80 pounds per acre.

SCS PHOTO

SCS PHOTO



LEGEND

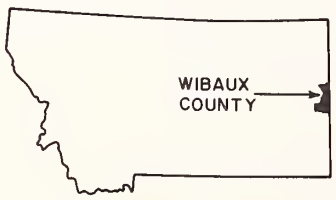
WHITE-TAILED DEER & RING-NECKED PHEASANT

SAGE HENS

FISH PONDS

NOTE: Mule Deer, Antelope, Sharp-Tailed Grouse and Hungarian Partridge are generally widespread throughout the county.

SOURCE: Report of Resources of Eastern Montana Basins.
U.S. Department of Interior - Bureau of Reclamation - August 1972.



LOCATION MAP

RECREATION RESOURCE MAP
FISH AND WILDLIFE
WIBAUX COUNTY
MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000
TRANSVERSE MERCATOR PROJECTION
SOURCE MATERIAL: AMS TOPOGS NL13-2, NL13-5

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND, OREG. 1973

M7-0-23050F-L

FISH & WILDLIFE

The wildlife resources in the District are a major attraction for hunting, fishing and recreation enthusiasts. Practically all of the lands in the District can be considered habitat for wildlife. In addition to having real values to hunters and fishermen, wildlife also attract campers, hikers, artists and photographers into the area. Wildlife can therefore be considered to have an important part in the economy of the community.

The Fish and Wildlife resources map divides the District into three broad habitat areas. The largest of these is the upland plains. These are undulating to hilly uplands used primarily for livestock grazing and dry cropland. These areas provide habitat for mule deer, antelope, sharptail grouse and the gray (Hungarian) partridge.

The second habitat area occurs along Beaver Creek and its tributaries. Also included are the brushy coulees and draws commonly found in the District. These areas provide habitat which supports populations of white-tail deer and ring neck pheasants.

The third area includes the clay shale breaks and badland areas located in the southwestern portion of the district. In addition to the mule deer, antelope, sharptail grouse and partridge, populations of sage hens are found in this area.

Furbearing species in the District include muskrat, mink, and beaver. The habitat for these species lies principally along Beaver Creek. Some trapping for these species is being done by a few individuals.

Predators found throughout the District include coyote, fox, raccoon, bobcat, skunk and weasels.

There are approximately twelve reservoirs in the District of adequate size and depth to provide waters for sustaining year around fisheries. These ponds are stocked by the Montana Department of Fish and Game or by individual landowners. Bass, Blue-gill, Rainbow Trout and Northern Pike are the most common species of fish used in stocking these ponds.

Lamesteer National Wildlife Refuge along with approximately 600 small ponds serve as nesting and rest areas for migratory waterfowl such as ducks and geese.

TOWN OF WIBAUX

WIBAUX COUNTY

MONTANA

OCTOBER 1973

440 0 440 880 FEET

SCALE 1 : 10,560

RECREATION & HISTORIC AREAS

The Wibaux County Conservation District like other Districts in eastern Montana is known for its open space. The area is a colorful grassland interspersed with native flowering plants. Green ash, wild plum, chokecherry and American Elm grown in the coulees. Teepee rings of Indian encampments are found on the ridges overlooking the vast prairie grassland. Rock chips from agate, jasper and petrified wood are scattered about the area. Indians used these materials to make arrowheads, scrapers, and other tools.

An area in the southwestern part of the district and smaller areas in the northern part are typified by rough broken lands exposing many colorful geologic formations. Fossils of snails, fish, oysters and other marine life are found in these areas.

Much of the Districts early history is associated with large cattle ranchers. The most notable being the Pierre Wibaux Ranch. This was followed by the homestead days of the early 1900's and the development of numerous community trade centers. These have since served their purpose and Wibaux is the only remaining trade center in the District.

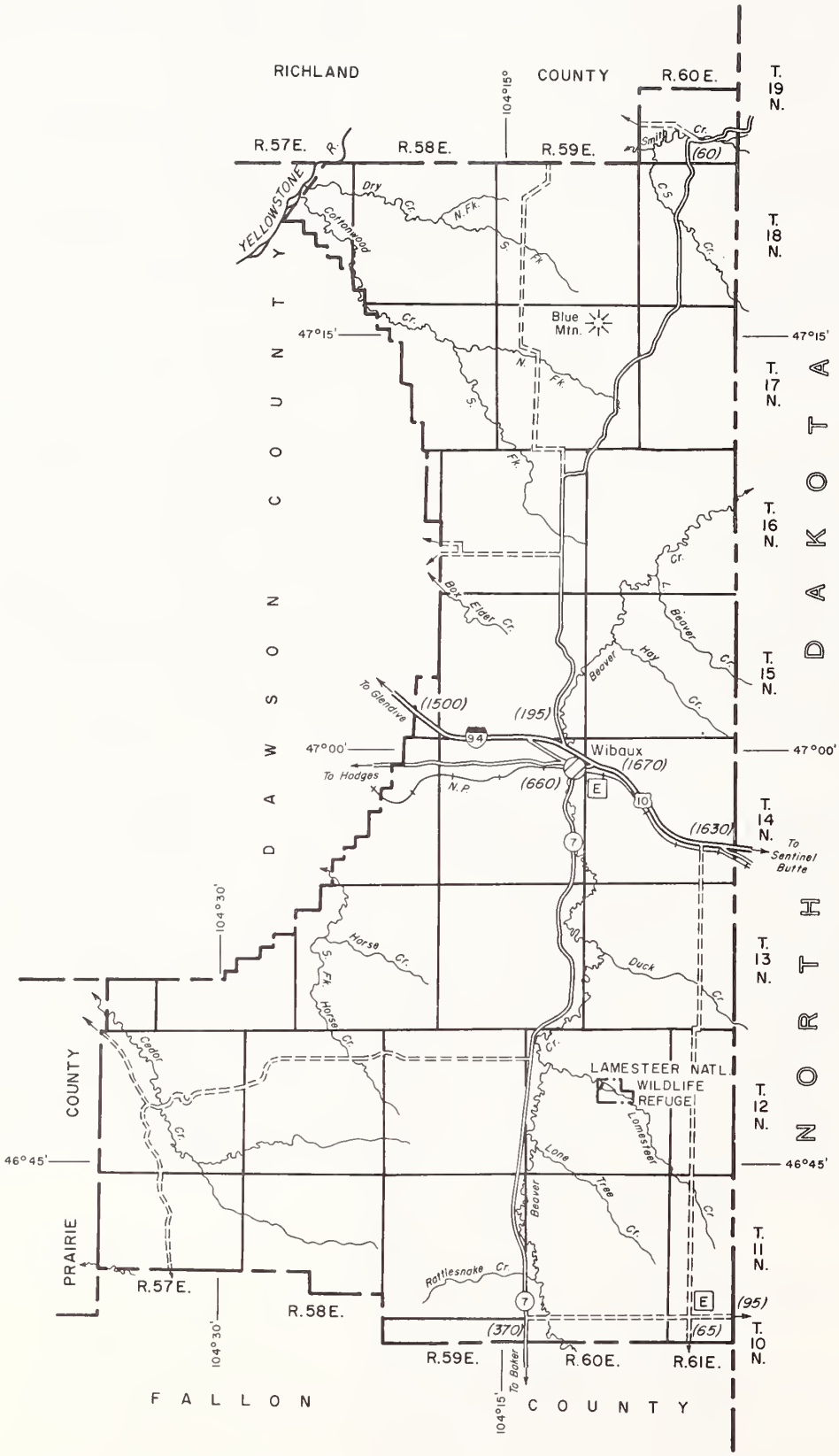
Recreation facilities found in or near the town of Wibaux include camping areas, rodeo arena, county fairground, city park, baseball fields, and a swimming pool.

Big game hunting provides the largest recreation attraction for both local and out-of-state hunters. The District lies within three hunting areas which includes parts of Richland, Dawson, and Fallon counties. Mule deer provide the greatest take followed by antelope and White Tail Deer.

Sharptail grouse, hungarian partridge, ring-neck pheasant and sage hens along with ducks and geese provide recreation in the form of small game and waterfowl hunting for local residents.

Recreation in the form of fishing is provided by the numerous farm reservoirs stocked with trout, pike, bass, and blue-gill.

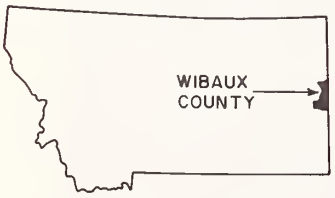
Additional information on recreation or the early history of the area can be found at the Centennial Car which serves as a visitor center for tourists. Other sources of information include the "Wibaux Golden Jubilee" booklet prepared in 1961 by local residents recalling the first 50 years of county history, and a report entitled "An Appraisal of Potential Outdoor Recreation Developments" prepared by the Wibaux County Technical Action Panel.



LEGEND

======	GRADED GRAVEL OR DIRT ROADS
(1500)	AVERAGE TRAFFIC COUNT (24 hr. period)
E	GRAIN ELEVATORS

SOURCE: Traffic Count - 1970 - Montana Highway Commission



LOCATION MAP

TRANSPORTATION AND MARKETING MAP

WIBAUX COUNTY

MONTANA

OCTOBER 1973

5 0 5 10 MILES

SCALE 1:500,000

TRANSVERSE MERCATOR PROJECTION

SOURCE MATERIAL: AMS TOPOGS NL13-2, NL13-5

TRANSPORTATION AND MARKETING

Transportation and marketing are an integral part of the modern production system. Efficient and rapid movement of people, raw materials, and finished goods to and from an area is essential to community development.

Transportation

Highway transportation in the District includes Interstate 94 running east-west through the District. This is the main east-west highway across the northern United States and carries large amounts of tourist and commercial traffic. Daily bus passenger service is available at Wibaux connecting with east and west terminal points. State Highway No. 7 connects Baker in Fallon County with Interstate 94 at Wibaux. In addition, there are approximately 720 miles of secondary roads in the District. This equals 0.2 for Fallon, 0.14 for Richland, and 0.11 for Dawson counties.

Rail service in the District is provided by Burlington Northern Railroad which provides daily freight service. The nearest rail passenger service is an Am-Tract stop at Glendive on an alternate day basis.

There are no commercial airports in the District, however, daily air service and connections to nation wide airlines are available at Glendive.

Marketing

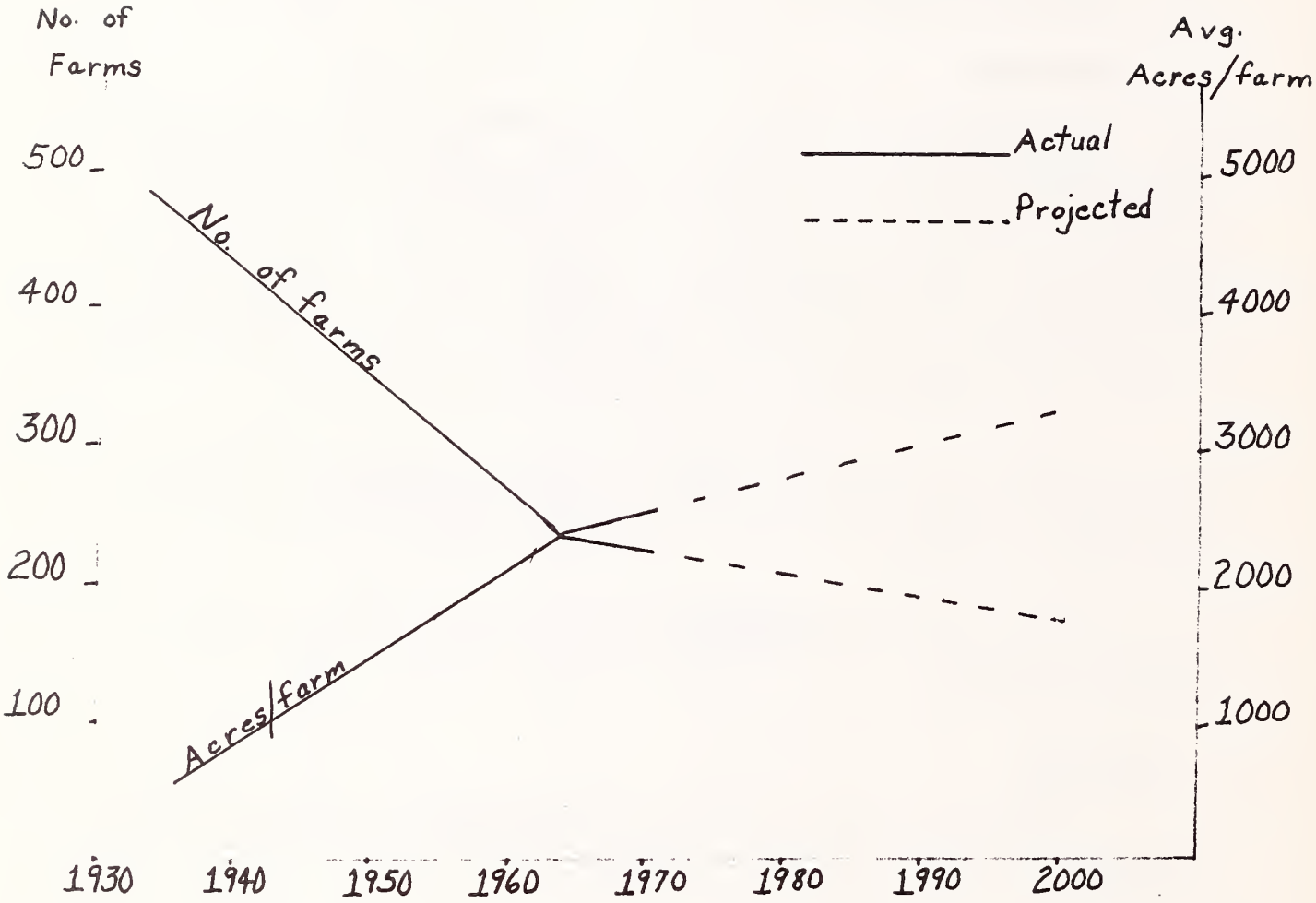
Nearly all of the small grains produced in the District are marketed through local elevators and then shipped by rail or truck to terminal markets, both east and west.

Box car shortages in the past have resulted in marketing delays. The total commercial storage available in the District is 350,000 bushels.

Livestock are generally marketed through auction yards located outside the county or sold directly off the ranch to feeder buyers.

There are four auction yards located within a 70 mile radius of Wibaux.

FARM NOS. & SIZE



Source: Montana Agrucultural Statistics - Projections M.S.U. Agricultural Experiment Station, October 1966

Acres	1969	1964
Less than 50	12	3
50 - 499	25	25
500 - 999	42	61
1000 - 1999	48	54
2000 - Over	84	72

Source: 1969 Agricultural Census

FARMS

TYPES, SIZE, AND TENURE

The number of farms in the District has steadily declined during the past 15 years with the average size of farms increasing proportionately. During 1954-69 period, the district experienced a 27% decline in farm numbers. Projections indicate a continued gradual decline.

Land values have been increasing steadily. This is beneficial to established farm operators since it increases their net worth giving them greater borrowing power. This is shown by the fact that the average value of land and buildings per farm increased approximately seven per cent per year from 1964 to 1969. The 1969 census shows the average value of land and buildings to be $116,059 per farm. This increased value has made it more difficult for young men to become established in farming. The average age of farm operators in the district is 48.6 years.

Ownership of farms is as follows:

Full owners	63
Part owners	114
Managers	34

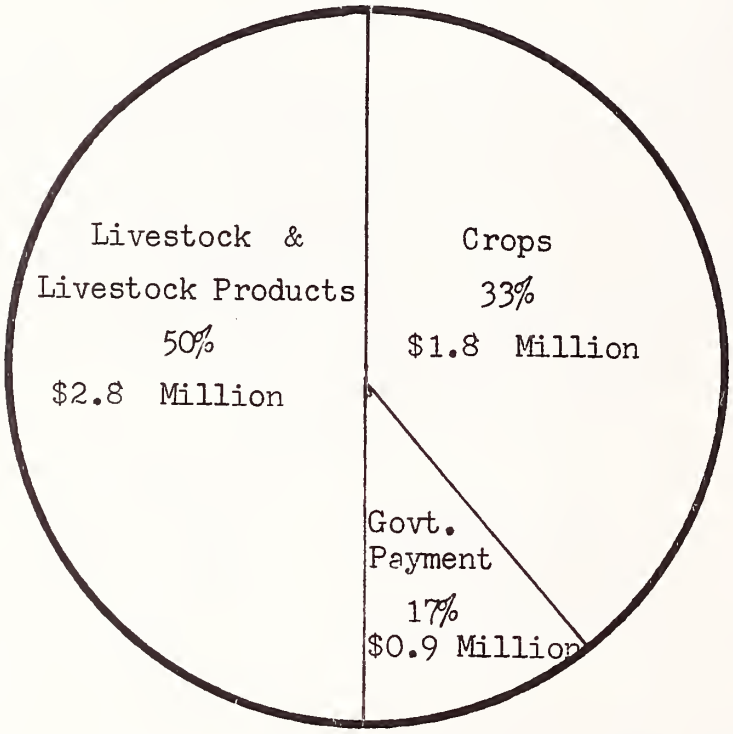
1969 Censes of Agriculture

The most common type of farm operation is a combination cash grain and livestock enterprize.

Shown below are the number of farms by type of product reported in 1969.

	No. of farms
Cattle and calves	158
Hogs	33
Sheep	44
Horses	105
Wheat	158
Barley	88
Oats	112
Field Corn	22

AGRICULTURAL INCOME
1971*



* 1971 Montana Agricultural Statistics

FARMS BY ECONOMIC CLASS*

Class	Sales	No. of Farms	% of Farms
I	$40,000 and under	11	5
II	20,000 - 39,999	43	20
III	10,000 - 19,999	63	30
IV	5,000 - 9,999	43	20
V	2,500 - 4,999	21	10
VI	50 - 2,499	7	3
Part - Time		21	10
Part - Retirement		2	2

* Source: 1969 Census of Agriculture

AGRICULTURAL INCOME

Agriculture is the leading industry in the district. Cash farm receipts from the sale of agricultural products rose from 4.9 million dollars in 1968 to 5.5 million dollars in 1971. During this period, livestock and livestock products accounted for approximately 50% of the total cash farm receipts.

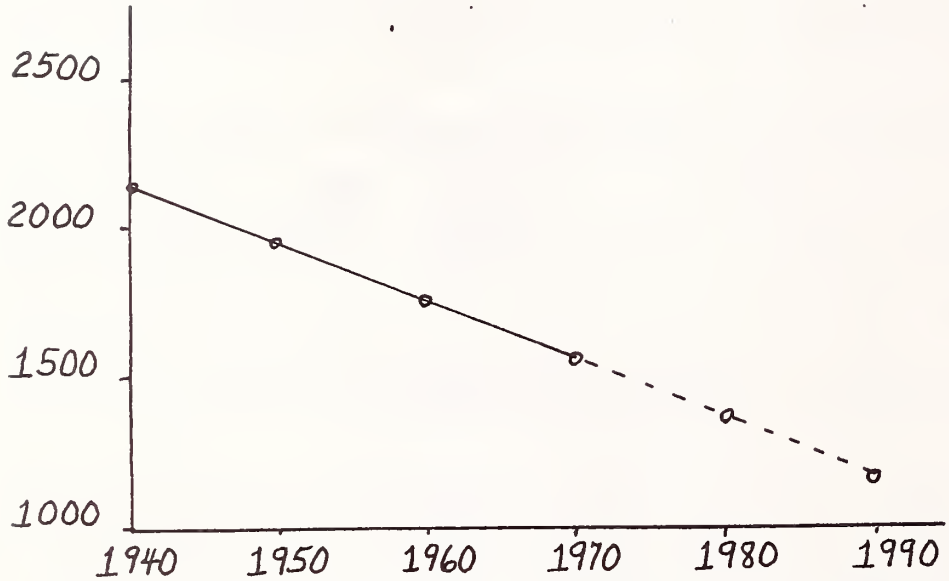
The following table shows the average cash receipts per farm as compared to the average for the state.

	1968	1969	1970	1971
Cash Receipts/farm (Co. Average)	$22,600	25,800	25,300	25,400
Cash Receipts/farm (State Average)	21,300	23,000	26,000	27,600

In 1971, farms in the district ranked 44th among all Montana counties in average cash receipts per farm.

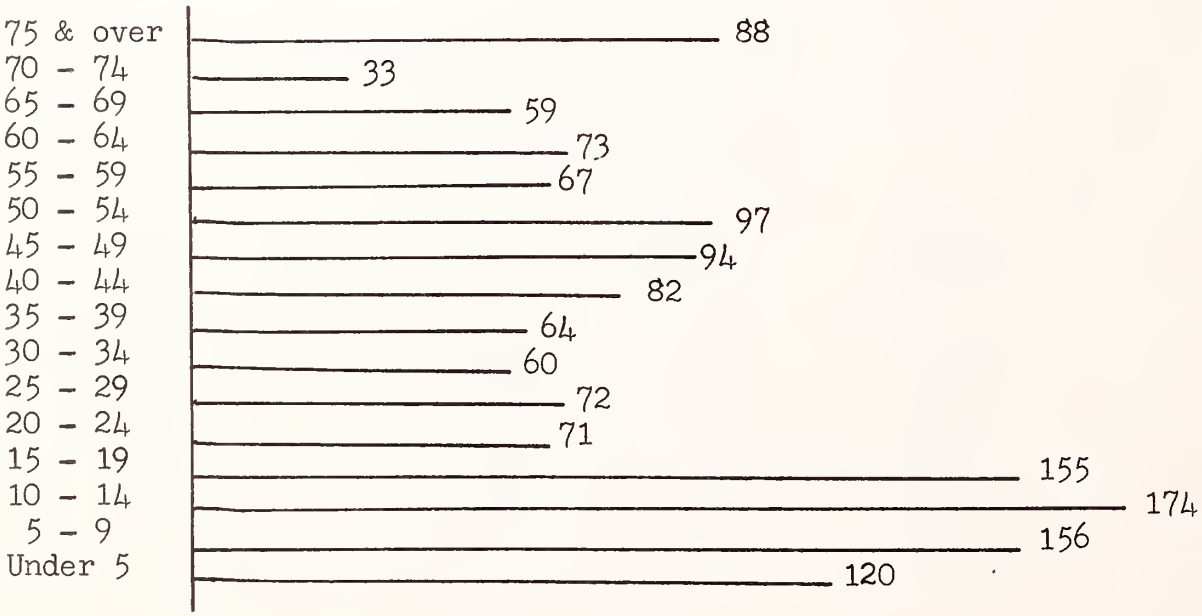
The distribution of farms by economic class (opposite page) shows the number of farms by sales grouping. It is interesting to note that only 25% of the farms had sales exceeding $20,000, compared to 34% statewide. In addition, 23% of the farm operators reported 50 days or more of off-farm work.

*Population Trends & Projections**



* Montana Data Dook-Dept. of Planning & Economic Development Comprehensive Area-wide Sewer & Water Plan - 1970 (Dawson, Prairie & Wibaux Counties)

POPULATION BY AGE DISTRIBUTION - 1970*



* U.S. Department of Commerce - Bureau of Census

POPULATION

Wibaux County like most eastern Montana counties has been faced with a declining population. During the period from 1950 to 1970, population declined from 1907 to 1465. This is a decline of 23% compared to an 18% decline for other eastern Montana counties which lost population during this period.

Population projections continue to show a gradual decline until 1990.

The town of Wibaux increased from 39% of the county population in 1950 to 44% in 1970.

	1950	1960	1970
Town of Wibaux	739	766	644
Rural	1,168	932	821
COUNTY TOTAL	1,907	1,698	1,465

Wibaux County is classed as a rural county. The town of Wibaux with a population of 644 is the only trade center in the district.

As shown by the age distribution chart, the heaviest migration occurs in the age groups after high school to the mid-20's. This is the result of high school graduates moving from rural areas seeking employment, going to college or entering military service. As shown in the distribution graph, Wibaux County is experiencing a net loss of at least half of its young people between the ages of 18-25.

INCOME

Based on the poverty definition as used in the 1970 census report, 46 or 12.7 percent of all families had incomes less than the poverty level. This is slightly higher than the surrounding counties of Richland, Dawson and Fallon. Seventy-seven families or 21.3% had incomes less than 125% of poverty level. Most families in this category spend virtually all of their income on the necessities of food, clothing, shelter, transportation and medical care.

Family Income - 1969*

	Non-Farm Families		Rural Farm Families	
	No.	%	No.	%
Under $3,000	29	16	25	14
3,000 - 5,999	28	16	43	23
6,000 - 8,999	34	20	59	32
9,000 -11,999	39	22	27	15
12,000 -14,999	35	20	12	6
15,000 -24,999	11	6	14	7
Over 25,000	-	-	5	3
	176	100%	185	100%

* U. S. Bureau Census - 1970

Fifty-one percent of all families in the district are rural farm families. Although the median income for rural families is lower than for non-farm families, the number with income below the poverty level in this group is lower with 8.1%.

EMPLOYMENT

Nearly one-half of the labor force is directly employed in agriculture and a large portion is engaged in service to agriculture. The distribution of employment is shown in the following table.

Employment by Industry Groups*

Agriculture	263
Mining & Construction	19
Public Administration	83
Manufacturing	15
Transportation & Utilities	17
Trade Service & Finance	95
Professional, Educational And Religious	41
TOTAL	533

*Source-U. S. Bureau of Census - 1970

PUBLIC FACILITIES

There are two local governmental units within the boundaries of the District. A board of County Commissioners governs the functions of the county. A modern courthouse constructed in 1953 serves as the center for county offices. The town of Wibaux is governed by a mayor council form of government.

The District is served by one high school and two elementary schools. The 1973-74 school enrolment is 131 High School students and 232 elementary students. At one time there were 47 elementary schools in the district.

There are no hospitals or resident physicians in the district. Nearest hospital facilities and physicians are located in Beach, North Dakota and Glendive, Sidney, or Baker, Montana.

Plans have been completed for construction of a new nursing home to be located in Wibaux.

Electricity and natural gas are provided to the Town of Wibaux by Montana Dakota Utilities Company. Golden West Electric Cooperative provides electricity to rural areas. Nearly all residents throughout the county are provided with telephone service.

There are no radio or television stations located in the District.

TAXATION

The 1972 taxable valuation of Wibaux County was $7,922,569. This is a 3% increase over the 1969 taxable valuation. A similar comparison for the state shows an 8.5% increase in taxable valuation during this same period.. The following table gives a break down of taxable valuations for 1972 as follows:

	Taxable Valuation	% of Total
Property other than Public Utilities	$3,165,233	40.0%
Local property of Public Utilities	17,868	.5%
Public Utilities Alloc. by State	672,833	8.5%
Assessment of net proceeds	4,066,635	51.0%
	$7,922,569	100.0%

The total average mill levy for state, county and schools shows an increase of 50% during the past five years as shown in the following table.

Year	Average mill levy for state, county & schools
1969	87.81
1970	70.25
1971	89.53
1972	90.74
1973	132.10

The 1972 taxable value for all agricultural land and improvements was $1,230,655 dollars, representing 15% of the total county valuation. The average taxable value of all agricultural land in the district is $1.70/acre. This compares to $1.20/acre for Fallon County, 1.59/acre for Dawson County, $2.33/acre for Richland County and $1.45/acre for McCone County.

SECTION IV
OBJECTIVES, GOALS, & PRIORITIES

OBJECTIVES & GOALS

The District will work toward:

1. Encouraging and assisting local people to formulate a plan for the orderly development of natural resources in the district using basic soils information as a tool in the decision-making process.

   Goal: Carry out a continuous education and information program to reflect changing needs.

2. Including as part of the district information program, the total benefits of conservation planning to all landowners.

   Goal: Program to achieve 85% of the land area under conservation plan by 1990.

3. Encourage the treating of the total resource needs of the land instead of individual problems or needs.

   Goal: Program to have 80% of the land area adequately treated by 1990.

4. Improving the range resources as outlined within the objectives, goals and time frame of the Montana Rangeland Resource Program.

   Goal: Refer to goals of Montana Rangeland Program.

5. Developing an information and education program to continually keep farmers informed of means to improve production while protecting the cropland resource.

   Goal: Establish information and education programs each year covering such items as wind and water erosion control practices, uses of alternate crops and cropping systems, proper application of fertilizers, treatment of saline-seep areas etc.

6. Monitoring water development projects to assure maximum beneficial use of water within each total watershed area.

   Goal: Review water development projects annually to assure a proper balance of available water and developments within each drainage basin.

7. Encourage the development of the recreation potentials of the district with priorities placed on meeting the needs of local people.

   Goal: Establish information programs to acquaint local people with the recreation potentials available within the district.

PRIORITIES

The District will concentrate their efforts of getting treatment on the land to conserve water, prevent erosion and prevent or reduce the pollution of water or land. The second major effort of the district will be to assist the local rangeland committee in improving the condition of the resource as outlined in the objectives and goals of the Montana Rangeland Resource Program.

SECTION V
PROBLEMS and OPPORTUNITIES

PLANNING & DEVELOPMENT

The Conservation District can contribute significantly to the effectiveness of a resource planning program. The data on the natural resources of the district can help in determining the effects of both urban and agricultural uses on these resources. In resource planning and development, the apparent problems often are not the real problems but rather symptoms of several related problems. Each must be identified and dealt with in a manner that will treat the symptom and effect a cure. In this section the problems relate to each major resource, and the opportunities which follow list ways in which the District will attempt to solve these problems.

Problems

1. Full use is not being made of the soil survey report in the district due to lack of interpretative data on engineering properties, urban uses etc.

2. In the past there has been no current plan to guide development of the natural resources in the district.

3. Approximately 41 percent of the agriculture land area is presently not under a district conservation plan.

Opportunities

1. Work toward getting soil survey report updated to meet present day criteria.

2. Encourage formation of county-wide planning board to include the town of Wibaux.

3. Work closely with county planning board to insure coordination of programs and projects.

4. Provide to the planning board inventory data on natural resources for use in making sound planning decisions.

5. Provide one supervisor to serve as member of county planning board as per Montana statutes.

6. Coordinate and make available to planning board information of other agencies.

7. Develop committee structures of associate supervisors, youth boards, governing bodies, civic groups and other interested persons to forward the efforts of the district in all resource activities.

8. District employees will be used as available to assist in various phases of conservation planning.

9. District supervisors will encourage the development of conservation plans to neighbor farmers and ranchers.

10. Make use of other programs, such as the Great Plains Conservation Program to encourage the development of Conservation Plans.

11. Establish planning priorities to reflect the treatment needs of the land.

CROPLAND RESOURCES

Stronger prices for grain and other agricultural products are expected to encourage producers to intensify production to bring idle land into production, to modify established cropping patterns and possibly to bring some new land into production. Higher prices for agriculture products are a welcome change to the farm economy since according to 1970 census data, 69% of the farm families in the District had family incomes of less than nine thousand dollars. District supervisors urge however that producers consider all available alternatives before making radical changes in their operations.

Problems

1. There are approximately 13,300 acres of Class 6 land presently being cropped. Grain production on these lands is generally not feasible due to low yields and high erosion hazards.

2. Better crop residue management is needed on 8000 acres.

3. Strip cropping and associated practices are needed on 56,000 acres for wind and water erosion control. Changes in cropping systems to include more second cropping has resulted in a tendency to destroy certain practices such as stripcropping.

4. Saline-seep occurs on an estimated one thousand acres of cropland. These areas have expanded considerably during recent years due to above average precipitation. Acres severely affected result in a total loss of crop production.

5. Crop yields vary considerably due to variations in precipitation and other climatic factors.

6. Much of the fertilizer application is not based on soil tests. This results in inefficient use. The problem is further compounded by shortages and inadequate commercial and on-farm storage facilities.

7. With approximately 85% of the harvested crop being wheat, there is a need for additional alternate crops to meet the demands of changing cropping systems.

8. Restrictions have been placed on certain chemicals for weed and insect control.

Opportunities

1. Develop an information program to point out the need and benefits of converting Class 6 lands to permanent cover.

2. Recommend that high priorities for cost-share programs be placed on conversion of Class 6 lands to permanent cover.

3. Encourage expansion of livestock enterprises to fully utilize forage production from Class 6 lands.

4. District will review conservation planning requests and establish priorities to reflect the needs of the land.

5. Conservation practices to control erosion will be based on a detailed study of the problem and a thorough analysis of alternative treatments on record in a conservation plan developed by the cooperator.

6. The district will place increased emphasis on using latest research information to reduce the development of saline-seep areas.

7. Studies presently being conducted, indicate that weather modification may influence patterns and amounts of rainfall in the District. The district recommends that research be limited to specific and carefully designed projects to study its effects on production, cropping systems, erosion, runoff and other consequences which may result from weather modifications.

8. Maximize the use of fertilizer by encouraging application rates based on soil tests.

9. Encourage the proper storage and handling of fertilizer materials.

10. Encourage the development of well planned cropping system using recommended varieties and high quality seeds along with cultural management practices to increase production and reduce problems of weed and insect control.

11. Encourage the use of available programs to aid producers in the establishment of conservation practices to protect soil from erosion.

RANGE AND PASTURE RESOURCES

The improvement of our environment and a potential for increased income are available to local ranchers and the general public through better rangeland management. Approximately 50% of the agricultural income is derived from the sale of livestock and livestock products. Range improvement will directly reduce soil losses from wind and water erosion on rangeland. Water and air pollution will be minimized. Stream flow stabilization and a clean sediment free water supply will result from improved range management.

Problems

1. 36% or 131,218 acres of private and state rangelands are in need of additional treatment.

2. Need to develop a better understanding of the rangeland resource by ranchers and other users.

3. Lack of adequate water supplies to provide necessary water for efficient forage utilization during all seasons.

4. Competitive use of rangeland for livestock production, wildlife, and recreation.

5. Economic loss due to 35% of the rangeland in fair to poor condition.

6. Need for a better understanding of the rangeland resource by consumers.

7. Losses of livestock due to predators and reduced forage production from rodents and insect infestations.

8. Forage production varies considerably due to variations in precipitation and other climatic factors.

9. Loss of forage production due to increase of noxious weeds in some areas.

10. Need for increased management on fragile lands to reduce sediment pollution.

Opportunities

1. In order to attain the district goals in the rangeland program of improving the rangeland resource, there will be established a coordinated effort between the Rangeland Resource Committee

and the District to attain the goals established by the committee.

2. Encourage that the development of the rangeland resource be considered in its proper perspective and coordinated with other land use planning decisions in the district.

3. Broaden the information and educational program to develop a better understanding of the rangeland resource.

4. Serve in the area of predator control, by functioning as a liasion between local ranchers and predator control agencies.

5. Studies presently being conducted indicate that weather modification may influence patterns and amounts of rainfall in the district. The district recommends that research be limited to specific and carefully designed projects to study its effects on forage production, changes in plant communities and animal populations, erosion, run-off and other consequences which may result from weather modification.

6. There is an economic potential for various types of recreational development especially in the areas of fee hunting and vacation farms and ranches.

7. There is a potential for additional livestock feeding which will make more efficient use of local resources and expand the economic base of the community.

8. Encourage the use of well designed grazing systems to bring about improved range condition and greater economic returns.

9. Encourage additional research which contributes to increased forage production and protection of the rangeland resource.

10. Encourage the use of tame grasses to increase forage production and provide protection to native grasses during critical growing periods.

11. Place planning priorities on critical erosive lands to reduce sediment production.

12. Encourage the use of available programs to aid ranchers in conservation practices to protect the rangeland resource.

WATER RESOURCES

Water is rapidly becoming a priceless resource and there are increasing demands to improve its quality. Community growth, agricultural needs, recreational uses and industrial development are dependent on adequate supplies of good quality water.

Problems

1. Excessive run-off from snow melt causes flooding which damages croplands, roads, bridges and dwellings built on flood plains.

2. High sediment loads carried by flood waters causes silting of water storage impoundments and damage to fish habitat.

3. Additional need for more utilizational of water to increase hay production.

4. Variations in seasonal flow on Beaver Creek resulting in under utilization of the water resource and loss of an economic opportunity.

5. Undetermined effects of potential strip mining on ground water aquifers.

6. Mixing of ground water aquifers from drilling and development of wells and exploration studies.

Opportunities

1. Encourage land management practices that will reduce runoff and stabilize highly erodable soils.

2. Encourage the development of potential waterspreading projects along Beaver Creek and its tributaries.

3. Integrate the resources of the total watershed area in planning water development projects.

4. Encourage inter-agency cooperation in developing community betterment projects.

5. Encourage complete study of ground water resources.

MINERAL RESOURCES

The natural gas and oil deposits developed in the Pine Unit area of the district will continue to be an important resource. Coal deposits are extensive and are presently being considered for development. This development will have a tremendous impact on the economic, social and environmental aspects of the community.

Problems

1. More information is needed on the effects of mineral exploration and development in regard to the quanity and quality of the ground water resources.

2. There is a lack of information pertaining to the development of coal resources.

3. There is a need for a better understanding by ranchers of leasing practices and arrangements.

4. Strip mining may result in accelerated erosion, sediment damage, water pollution and associated reclamation problems.

5. Many of the mineral rights are not under control of the surface owner.

6. Division of mineral rights from surface rights causes problems and extra costs to the surface owner, for keeping abstracts current.

7. Areas with the best potential coal development occur on the higher value lands.

8. Trespass by exploratory companies is practiced on county right-of-ways where only an easement has been granted.

Opportunities

1. The development of the coal resources will result in new industry and provide more employment for the area.

2. Encourage more reclamation studies aimed toward bringing mined land back into productive cropland status.

RECREATION & HISTORIC AREAS

Appraising the potential for recreation is an essential step in planning to meet the recreational needs of the community. Recreation is the most under-developed resource in the district. The development of this resource could provide an increase in the economic base of the community.

Problems

1. Need for additional funding to complete development of Town of Yesteryear.

2. There is a need for additional recreational developments to meet the needs of all age groups.

3. There is a need for more water-based recreation facilities.

4. There is a need to educate local people of the economic opportunities through the development of recreation.

Opportunities

1. Establish a better liason between various agencies during the early planning stages of road design in order that more consideration can be given to the development of waterbased recreation facilities.

2. Work with and encourage local people to consider the development of an over-all recreation plan for the entire community.

3. Encourage educational programs to inform farmers and ranchers of the opportunities in the areas of recreation development.

4. Support legislation to provide funding for studies of the ground water resources in the area.

5. Encourage the development of by-products resulting from various forms of coal processing.

6. Encourage educational programs to better acquaint landowners with all aspects of mineral leasing practices.

FISH & WILDLIFE RESOURCES

Fish and wildlife resources are an important resource in the District. With the increased growth of outdoor oriented recreation, this resource will become an even more important consideration in the overall resource development program of the district.

Problems

1. A few careless and irresponsible people have caused poor relations between landowners and sportsmen.

2. There is no local sportsmans group to establish a liason between landowner and sportsman.

3. Public access and developed facilities for existing fish ponds are inadequate.

4. More pressures are being placed on private land each year for hunting.

Opportunities

1. Inform landowners of potential for various types of recreational developments, especially in the areas of fee hunting, guide service and vacation farms and ranches.

2. Encourage where practical, the development of wildlife habitat areas in conservation planning.

3. Consider items beneficial to wildlife development in the design of conservation practices such as fencing of structures, selection of species adapted to providing food and cover for wildlife, etc.

4. Establish a better liason between various agencies during the early planning stages of road design in order that more consideration can be given to the development of water impoundment areas suitable for fisheries.

5. Sponsor programs designed to promote better relationships between sportsmen and landowners.

6. Encourage landowners and county commissioners to provide and regulate access provisions.

OTHER LANDS

Other lands in the district consist primarily of roads, farmsteads, rural schools, churches, cemetaries, etc. These areas if not properly treated can become sources for sediment production or areas for noxious weed infestations. It is estimated that 44% of the other land in the District is in need of additional treatment measures.

Problems

1. These lands without proper conservation measures, can be a major source of sediment pollution to rivers and streams.

2. These lands without proper treatment provide areas for noxious weed infestations.

3. Unstable ox-bows, streambanks and headcuts are depositing large loads of silts into waterways.

4. There is a need for additional farmstead and feedlot windbreaks and a need for renovation of numerous older windbreaks.

Opportunities

1. Shaping of existing and newly construction borrow areas along with stockpiling of topsoil will assist in getting these areas revegetated sooner, thereby reducing erosion and opportunity for noxious weed infestation.

2. Planting of trees along roadsides will result in reduced snow removal costs, add to the beauty of the countryside, and provide additional areas for wildlife habitat.

3. Consideration will be given to the protection of streambanks when projects are developed which may adversly affect the bank channel or course of the stream.

4. The district will encourage proper measures to control existing streambank erosion problem areas.

5. The district will place increased emphasis on establishment of farmstead and feedlot windbreaks to provide increased soil protection, improved wildlife habitat and asthetic values.

HUMAN & ECONOMIC RESOURCES

A number of social and economic problems relate to the population of the area. Many are deep seated and historical. Other are extensions of social changes affecting the state and nation. Development and improvement of public and community facilities will enhance the general economic and social climate of the entire district.

Problems

1. Out-migration of young people and lack of year around employment opportunities has caused a decline of population.

2. Farm numbers have been continually declining.

3. Lack of experienced farm labor because of its seasonal nature.

4. Lack of facilities and services to satisfy the needs of the agriculture community.

5. Rapidly rising costs of goods and services along with land values are making it increasingly difficult for existing operators to expand their enterprises.

6. Need for additional adequate solid waste disposal facilities.

7. There are no medical services or facilities in the district.

Opportunities

1. Encourage an on-going program to provide facilities and education for training a labor force to meet the needs of agriculture.

2. Encourage local leadership to recognize the potential for economic and social development of the community.

3. Promote the construction of private and community solid waste disposal sites through local, state and federal financing.

4. Continue to encourage information and training programs that will help keep farmers and ranchers informed of new technology, management skills, market facilities and new or improved plant species.

SECTION VI and SECTION VII
IMPLEMENTATION * ADOPTION

IMPLEMENTATION

There are numerous techniques for implementing different elements of the districts program. However, the use of each technique will be specifically fitted to the policies, goals and objectives of the district.

A. General Implementation Tools

1. Conservation District Organization, Plan of Work and Projects.

The Conservation District law provides broad authorities for implementing a Conservation District program. The District will provide leadership and utilize all possible assistance in carrying out their program. Standing committees and special committees, such as the Range Resource Committee, will be used as needed to further the objectives of the program.

Regular monthly meeting will be used to review progress and stimulate activities toward implementation of the District program.

2. Conservation District Cooperator Agreements

Voluntary agreements are negotiated between the conservation district and the individual land occupier or group, association, or entity of government to supply certain services according to a plan such as a Farm or Ranch Conservation Plan, a Range Management Plan, or engineering plans for a specific conservation practice.

3. Annual Plan of Work

Based on program goals and objectives, the supervisors will request assistance from local, state and federal agencies as needed to develop an annual plan of work.

4. Tax Policies

Possibly the most important but least understood plan implementation device is state and local taxation.

The tax values placed on land are often conservative, resulting in a direct subsidy to the land speculator. The low cost of holding land vacant is normally more than offset by increasing Market values. This situation is a direct cause of urban and rural sprawl.

In other cases open land is over assessed according to speculative value because of surrounding development. This situation may be partly remedied by the "Greenbelt" law which now provides that qualifying agricultural land is to be taxed according to current rather than potential use.

5. Zoning

Zoning is an exercise of the police power, i.e., the power of the state to regulate in the interests of the health, safety and general welfare of the public. Some of the purposes of zoning include environmental preservation, limitation of congestion, protection of property values and adequate provision of community services. The county commissioners may establish zones or districts for different uses of land and may regulate developmental patterns, building use and the area around buildings.

Section 16-4704, R.C.M. 1947, provides that zoning regulations shall be in accordance with the comprehensive plan. Comprehensive ordinances apply to an entire planning area and in the absence of such a plan may place the zoning ordinance in questionable legal status.

If a jurisdiction is experiencing emergency land use problems, a temporary interim zoning regulation may be enacted pending the completion of a comprehensive plan within a reasonable time. Such authority is provided to the county commission in Section 16-4711, R.C.M. 1947.

6. Land Use Regulations

Section 76-109, R.C.M. 1947, provides conservation district supervisors with the authority to formulate land use regulations within the district in the interests of conserving soil and water resources and preventing and controling erosion. A referendum is then submitted to qualified electors for their approval or disapproval of the regulation.

7. Floodway Management

Conservation Districts can contribute data to and become involved in floodway management. Pursuant to the Montana Floodway Management and Regulation act of 1971, a floodway management program may be carried out as follows:

a. A request for flood delineation studies is made by the local subdivision of government to the Montana Department of Natural Resources and Conservation.

b. Completed studies are used if available, and federal agencies (U.S. Geological Survey, SCS, Corps of Engineers, etc.) are contacted by the Department for technical assistance.

c. After delineation, the Department conducts a public hearing on the establishment of the designed floodway. As a result, floodway lines will be recorded and data furnished to local officials.

d. The local governing body then has a maximum of one year to establish and enforce floodway land use regulations at least as stringent as those established by the Department.

e. After local regulations are in effect, or one year after transmission of the floodway data, permits must be obtained before establishing or altering any artificial obstruction within the designed floodway.

8. Subdivision Regulations

The Montana Subdivision and Platting Act of 1973 requires each local governing body to adopt and enforce subdivision regulations by July 1, 1974. These regulations must meet or exceed state minimum requirements and must contain provisions for an environmental assessment to be submitted by the subdivider. Local review procedures as well as district representation on county planning boards will ensure that the Conservation District is afforded an opportunity to evaluate each proposed subdivision within the district.

B. Assistance

1. Financial and Technical

Major types of assistance available from federal agencies include the Soil Conservation Service and Agricultural Stabilization and Conservation Service programs. In addition, water and sewer facility grants and loans from the Farmers Home Administration and Department of Housing and Urban Development "701" planning grants are also available.

2. Private Assistance

A source of help often overlooked in planning and implementation of programs is the private sector. Citizen groups, area banks or industries, and chambers of commerce may be crucial to plan implementation and should be involved in planning throughout the process.

Resolution of Adoption:

On April 30, 1974 at Wibaux at a regular meeting of the board of supervisors, consisting of Chairman Floyd Weyer, Vice Chairman Albin Begger, Treasurer Louis Dobrowski, and Supervisors Stanley Nelson, Leon Thrams, Peter B. Schieffer and Wayne Marcus, did meet and review the prepared Wibaux County Conservation District program, and after such review did mutually agree and resolve that such district program be adopted.

Signed this 30 day of april 1974

Supervisors:

Floyd Weyer
Chairman

Albin A. Begger
Vice Chairman

Louis S. Dobrowski
Treasurer

Leon Thrams
Supervisor

Morris B. Douglas
Supervisor

Wayne P. Marcus
Supervisor

Peter B. Schieffer
Supervisor

Stanley A. Nelson
Supervisor

William Shuffee Jr
Secretary